

DVD Player/ Recorder

DVDR3400

User Manual	6
Manuel D'utilisation	78
Manual de Instrucciones	152



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Know these
safety symbols



 This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.

 The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les choc électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. _____
 Serial No. _____

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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

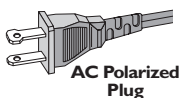
5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug.



A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Only use attachments/accessories specified by the manufacturer.

12.



Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. **Battery usage CAUTION** – To prevent battery leakage which may result in bodily injury, property damage, or damage to the unit:

- Install **all** batteries correctly, **+** and **-** as marked on the unit.
- Do not mix batteries (**old** and **new** or **carbon** and **alkaline**, etc.).
- Remove batteries when the unit is not used for a long time.

16. Apparatus shall not be exposed to dripping or splashing.

17. Do not place any sources of danger on the apparatus (e.g. liquid filled objects, lighted candles).

18. This product may contain lead and mercury. Disposal of these materials may be regulated due to environmental considerations.

For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance : www.eiae.org.

Class II equipment symbol



This symbol indicates that the unit has a double insulation system

EL 6475-E005: 04/01

'CONSUMERS SHOULD NOTE THAT NOT ALL HIGH DEFINITION TELEVISION SETS ARE FULLY COMPATIBLE WITH THIS PRODUCT AND MAY CAUSE ARTIFACTS TO BE DISPLAYED IN THE PICTURE. IN CASE OF 525 OR 625 PROGRESSIVE SCAN PICTURE PROBLEMS, IT IS RECOMMENDED THAT THE USER SWITCH THE CONNECTION TO THE 'STANDARD DEFINITION' OUTPUT. IF THERE ARE QUESTIONS REGARDING OUR TV SET COMPATIBILITY WITH THIS MODEL 525p AND 625p DVD PLAYER, PLEASE CONTACT OUR CUSTOMER SERVICE CENTER.'

LASER

Type	Semiconductor laser
	InGaAlP (DVD)
	AlGaAs (CD)
Wave length	658 nm (DVD)
	790 nm (CD)
Output Power	30 mW (DVD+RW write)
	1.0 mW (DVD read)
	1.0 mW (CD read)
Beam divergence	84 degrees (DVD)
	61 degrees (CD)

For Customer Use:

Read carefully the information located at the bottom or rear of your DVD Recorder and enter below the Serial No. Retain this information for future reference.

Model No. DVD RECORDER
DVDR3400

Serial No. _____

Index



This product incorporates copyright protection technology that is protected by US patents. Use of this copyright protection technology must be authorised by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision. Reverse engineering or disassembly is prohibited.

U.S. Patent Number 4,631,603; 4,819,098; 4,907,093; 5,315,448; and 6,516,132



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US patent Nr.: 6,466,734; 6,430,359; 6,091,882; 6,049,652; 5,335,079; 5,307,173; 4,908,713; 4,751,578, 4,706,121.



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HDMI

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English ----- 6

Français ----- 78

Español ----- 152

English

Français

Español

Table of Contents

General

Care and Safety Information	8
Setup precautions.....	8
Cleaning discs	8
About recycling.....	8
Product Information	9
Introduction.....	9
Accessories supplied	9
Region codes.....	9
Copyright notice.....	9
Special features	10

Product Overview

Main Unit	11
Remote Control	12
Using the remote control	14

Connections

Step 1: Basic Recorder Connections.....	15
Connecting the antenna cables	15
Connecting the video cable.....	16
Connecting the audio cables	18
Step 2 : Optional Connections.....	19
TV has only an antenna input jack.....	19
Connecting to a Cable Box or Satellite Receiver	20
Connecting to a VCR or other similar device.....	21
Connecting to a VCR and Cable Box/Satellite Receiver.....	22
Connecting a camcorder to the front jacks.....	23
Connecting a USB flash drive or USB memory card reader.....	24
Step 3: Installation and Setup.....	25
Finding the correct viewing channel	25
Setting the OSD language	25
Setting your TV channel programs.....	26
Setting the date & time.....	27

Recording

Recording	28
Discs for recording	28
Recording settings	29
RECORD settings.....	30
Recording from various sources	31
Archiving from a USB flash drive or USB memory card reader	33
Instant time-off recording.....	34
Watching another TV program during recording.....	34
Timer Recording.....	35
About timer recording.....	35
Timer recording (VCR Plus+® System).....	35
Timer recording (manually).....	36
Changing/ Deleting a timer recording.....	38

Table of Contents

Playback

Playback	39
Playable discs	39
Starting disc playback	40
Additional Playback Features	44
Changing to another chapter/track	44
Pausing playback	44
Searching forwards/backwards	44
Zooming in	44
Using the TOOLS options	45

Edit Recordings

Editing/ Finalizing Recording	48
About disc editing	48
Accessing disc editing menu	48
Playing your recordings on other DVD players (DVD±R only)	50
About title editing	51
Accessing title editing menu	51
About video editing	53
Accessing video editing menu	53

Other Information

DVD Setup Menu Options	56
Accessing the Setup Menu	56
GENERAL settings	57
RECORD settings	57
PLAYBACK settings	58
DVD settings	60
CHANNEL SETUP settings	62
CLOCK settings	64
Software Upgrade	65
Installing the latest software	65
Troubleshooting	66
Frequently Asked Questions	70
Specifications	72
Display panel symbols/ messages	73
Glossary	74

Care and Safety Information

CAUTION!

High voltage! Do not open the device. You run the risk of getting an electric shock.

The machine does not contain any user-serviceable parts. Please leave all maintenance work to qualified personnel.

Setup precautions

Finding a suitable location

- Place the set on a flat, hard and stable surface. Do not place the set on a carpet.
- Do not position the set on top of other equipment that might heat it up (e.g., receiver or amplifier.)
- Do not put anything above or under the set (e.g., CDs, magazines.)
- Install this unit near the AC outlet and where the AC power plug can be reached easily.

Space for ventilation

- Place the apparatus in a location with adequate ventilation to prevent internal heat build up. Allow at least 10 cm (4") clearance from the rear and the top of the set and 5cm (2") from the left and right to prevent overheating.

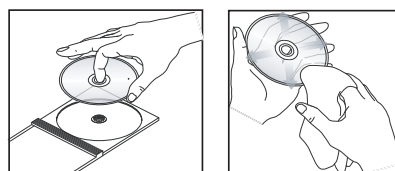
Avoid high temperatures, moisture, water and dust

- Apparatus shall not be exposed to dripping or splashing.
- Do not place any sources of danger on the apparatus (e.g., liquid filled objects, lighted candles.)

Cleaning discs

Some problems occur (frozen picture, sound disruptions, picture distortions) because the disc inside the unit is dirty. To avoid these problems, discs should be cleaned on a regular basis.

To clean a disc, use a micro fibre cleaning cloth and wipe the disc from the center to the edge in a straight line.



CAUTION!

Do not use solvents such as benzene, thinner, commercially available cleaners, or anti-static sprays intended for discs.

Since the optical unit (laser) of the recorder operates at a higher power than regular DVD or CD players, cleaning CDs intended for DVD or CD players may damage the optical unit (laser.) Therefore, refrain from using a cleaning CD.

About recycling

These operating instructions have been printed on non-polluting paper. This electronic equipment contains a large number of materials that can be recycled. If you are disposing of an old machine, please take it to a recycling center. Please observe the local regulations regarding disposal of packaging materials, exhausted batteries, and old equipment.

Product Information

Introduction

Your Philips recorder allows you to record TV programs or duplicate camcorder recordings to a DVD±RW or DVD±R and play pre-recorded DVDs. The recordings you make with this recorder will playback on DVD players and DVD-ROM drives. DVD±R discs have to be finalized before they can be played back on other DVD players.

Before you start using this recorder, complete the basic connections and set-up in three easy steps.

Step 1: Basic recorder connections

Step 2: Optional connections for other devices

Step 3: Basic installation and set-up

Please take time to read this user manual before using your recorder. It contains important information and notes regarding operations of the recorder.

Helpful Hints:

- If you have questions or if problems occur during operation, see the chapter 'Troubleshooting'.
- If you need further assistance, please call the customer support service for your country. The corresponding telephone numbers and e-mail addresses are given in the guarantee booklet.
- Refer to the type plate on the rear or bottom of the product for identification and supply ratings.

Accessories supplied

- Remote control and batteries
- Audio/video cables
- RF coaxial cable
- Quick Start Guide

Region codes

DVD films are usually not released at the same time in all regions of the world, thus all DVD players are keyed to a specific region code.

This device will only play **Region 1** DVDs or DVDs manufactured to be played in all regions ('ALL') DVDs from other regions cannot be played on this recorder.



Copyright notice

The making of unauthorised copies of copy-protected material, including computer programs, files, broadcasts and sound recordings, may be an infringement of copyrights and constitute a criminal offence. This equipment should not be used for such purposes.

Product Information (continued)

Special features



This is a simple programming system for recorders. To use it, enter the programming number associated with your television program. You can find this number in your favourite listings magazine.



i.Link is also known as 'FireWire' and 'IEEE1394'. This connection is used for the transfer of high bandwidth digital signals as used by digital video (DV) camcorders. It carries all audio and video signals via a single cable.

HDMI

HDMI (High-Definition Multimedia Interface) is a high-speed digital interface that can transmit uncompressed high definition video and digital multichannel audio. It delivers perfect picture and sound quality, completely free from noise. HDMI is fully backward-compatible with DVI.



'Copy or Play from USB to DVD'

This function allows you to copy your content in your USB flash drive/USB memory card reader to a recordable DVD disc.



A surround sound system developed by Dolby Laboratories containing up to six channels of digital audio



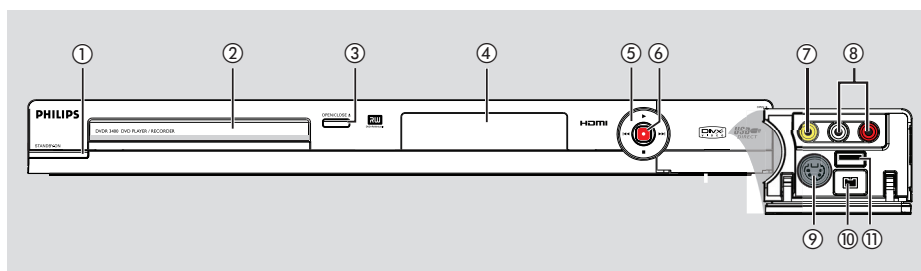
The DivX code is a video codec developed by DivXNetworks Inc., that compresses digital video to small sizes while retaining relatively high visual quality.



Philips DVD recorders support 'dual media' recording – the ability to create recordings on + and - discs (DVD+R/+RW, DVD+R DL, DVD-R/-RW.)

Main Unit

English



① **STANDBY-ON**

- Turns on the recorder or switch to standby mode.

② **Disc tray**

③ **OPEN/CLOSE ▲**

- Opens/closes the disc tray.

④ **System display panel**

- Show information about the current status of the recorder.

⑤ **◀◀ (PREV) / ▶▶ (NEXT)**

- Go to the previous/next chapter or track. Press and hold to make a forward/reverse search.

▶ (PLAY)

- Plays a disc.

■ (STOP)

- Stops playback/recording.

⑥ **● (RECORD)**

- Starts recording the current TV channel or the current video input source.
- Press repeatedly to set up a One Touch Recording at 30, 60 or 90 minutes interval.

Jacks behind the flap

Flip down the door as indicated by the **OPEN ▶** label at the right hand corner.

⑦ **VIDEO**

- Video input for camcorders or video recorders. Press **SOURCE** on the remote control to select 'CAM1' in order to view the input source.

⑧ **L/R AUDIO**

- Audio input for camcorders or video recorders.

⑨ **S-VIDEO**

- S-video input for SVHS/Hi8 camcorders or SVHS/Hi8 video recorders. Press **SOURCE** on the remote control to select 'CAM2' in order to view the input source

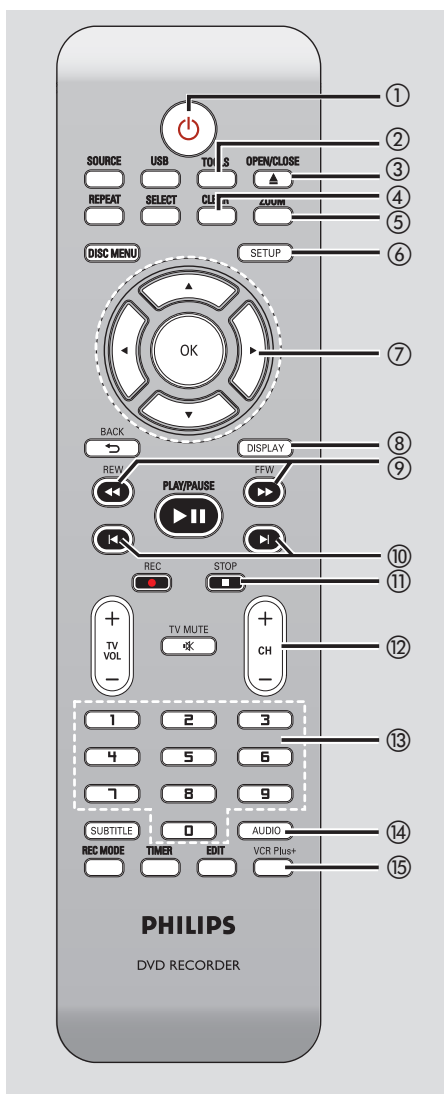
⑩ **DV IN**

- Input for digital camcorders or other suitable devices using this connector. Press **SOURCE** on the remote control to select 'DV' in order to view the input source.

⑪ **USB**

- Input for USB flash drive/ USB memory card reader. Press **USB** to view the contents of the USB flash drive/ USB memory card reader.

Remote Control



- ① **Power**
- Turns on the recorder or switch to standby mode.
- ② **TOOLS**
- Enters/exits the tools or disc/title editing menu.

- ③ **OPEN/CLOSE ▲**
- Opens/closes the disc tray.
- ④ **CLEAR ▼**
- Clears a track/file in the selection playlist/copylist.
 - Clears a timer entry.
- ⑤ **ZOOM**
- Enlarges a picture on the TV screen.
- ⑥ **SETUP**
- Enters/exits the setup menu.
- ⑦ **◀ ▶** : Cursor buttons for moving to the left or right.
▲ ▼ : Cursor buttons for moving up/down or changing the recorder's TV tuner channel.
- ⑧ **DISPLAY**
- Displays/removes the status bar.
- ⑨ **REW ◀◀ / FFW ▶▶**
- Fast reverse or fast forward search.
- ⑩ **PREV ◀◀ / NEXT ▶▶**
- Skips to previous or next chapter/track.
- ⑪ **STOP ■**
- Stops playback/recording.
- ⑫ **CH + / -**
- While in tuner, selects the next or previous TV channel.
- ⑬ **Numeric keypad**
- Selects a chapter/track number to play.
 - Selects the recorder's preset TV tuner channel.
- ⑭ **AUDIO**
- Selects an audio language (DVD, VCD) or an audio channel.
- ⑮ **VCR Plus+**
- Enters/exits the VCR Plus+® menu.

Remote Control (continued)

English

⑩ USB

- Accesses the contents of the connected USB flash drive/ USB memory card reader.

⑪ SOURCE

- Selects the recorder's input source (DV, EXT1, EXT2, CAM1, CAM2 or Tuner.)

⑫ SELECT

- Selects a track/chapter/file in the program menu.

⑬ REPEAT

- Repeat playback of title, chapter, track or disc in DVD mode.

⑭ DISC MENU

- Press to access the DVD disc menu or Index Picture screen of a DVD±R/±RW.
- Press to access the VCD disc menu when PBC is turned on.

⑮ OK

- Stores/confirms an entry.

⑯ BACK ↶

- Returns to the previous menu of a video CD (VCD.)

⑰ PLAY/PAUSE ►||

- Plays a disc.
- Pauses the playback or recording.

⑱ REC ●

- Starts recording the current TV channel or the current video input source.
- Press repeatedly to set up a One Touch Recording at 30, 60 or 90 minutes interval.

⑲ TV VOL +/–

- Adjusts the volume of the TV set (Philips TV only.)

⑳ TV MUTE ✖

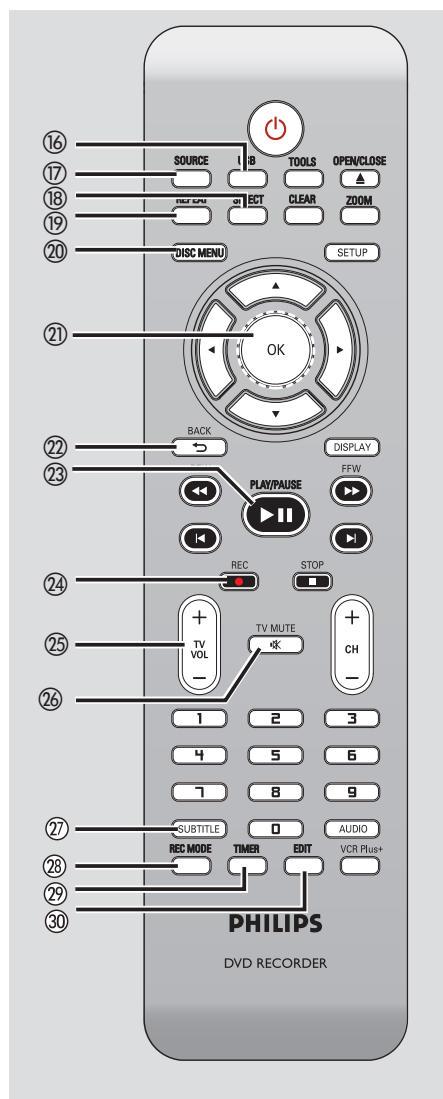
- Mutes the volume of the TV set (Philips TV only.)

㉑ SUBTITLE

- Selects a DVD subtitle language.

㉒ REC MODE

- Toggles between recording modes : HQ, SP, SPP, LP, EP, or SLP.



This determines the quality of the recording and the amount/length of time you can record on a DVD±R/±RW.

㉓ TIMER

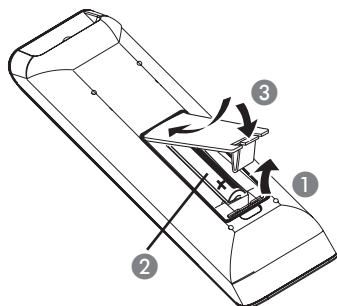
- Enters/exits the timer recording menu.

㉔ EDIT

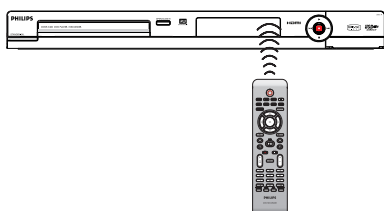
- Enters/exits the video editing menu.

Remote Control (continued)

Using the remote control



- 1 Open the battery compartment.
- 2 Insert two batteries of type R03 or AAA, following the indications (+ -) inside the compartment.
- 3 Close the cover.
- 4 Aim the remote control directly at the remote sensor (IR) on the front panel.

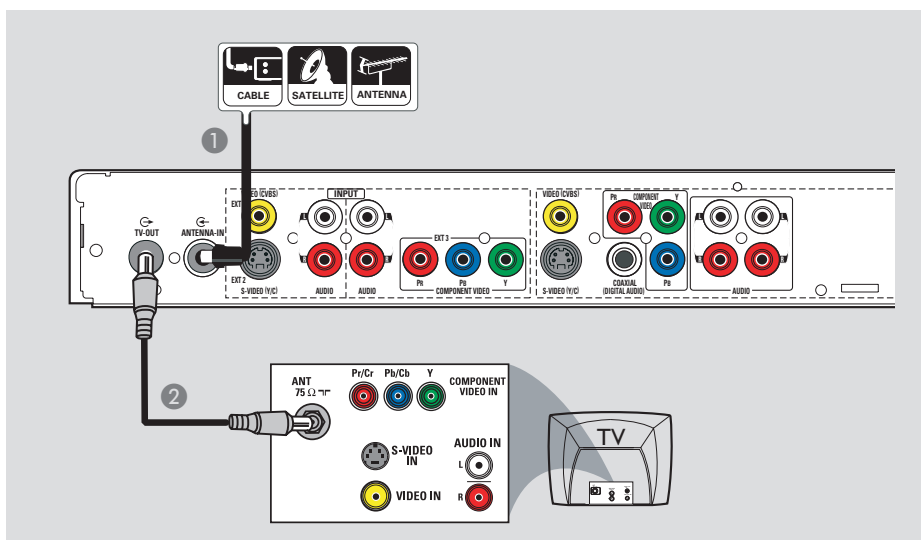


- 5 Select the source you want to control by pressing the **SOURCE** button on the remote control.
- 6 Select the desired function (for example ◀, ▶.)

CAUTION!

- Remove batteries if they are exhausted or if the remote control is not to be used for a long time.
- Do not mix batteries (old and new or carbon and alkaline, etc..)
- Batteries contain chemical substances, so they should be disposed of properly.

Step 1: Basic Recorder Connections



Connecting the antenna cables

These connections enable you to watch and record TV programs using this recorder. If the antenna signal is connected via a VCR, Cable Box or Satellite Receiver, ensure that these devices are turned on in order to watch or record the cable programs.

- **If your TV is equipped with an Antenna In (RF IN) jack only,** see “Step 2: Optional connections – TV has only an antenna input jack” for the complete connection to your TV.
- **If you want to connect to a VCR and/or Cable Box/Satellite Receiver,** see “Step 2: Optional connections” for the complete connection to your TV.

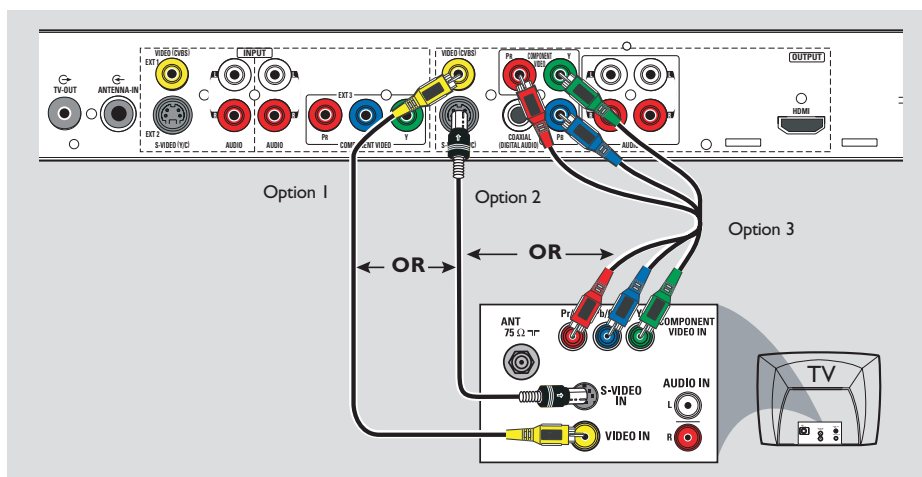
- 1 Connect the existing Antenna/Cable TV signal (or from the Cable Box/Satellite Receiver {RF OUT or TO TV}) to the **ANTENNA-IN** jack on the recorder.
- 2 Use the supplied RF coaxial cable to connect the **TV-OUT** jack on the recorder to the antenna input jack on your TV (VHF/UHF RF IN.)

Helpful Hint:

– Depending on how you have currently connected your TV channel (directly from an off-air antenna or Cable box or VCR), you will have to disconnect some of the cables before you make the above connection.

TIPS: Before making or changing any connections, make sure that all the devices are disconnected from the power outlet.

Step 1: Basic Recorder Connections (continued)



Connecting the video cable

This connection enables you to view the disc playback from this recorder. You need to choose only **one** of the options below to make your video connection.

Option 1: Using a Video (CVBS) cable

- Use the supplied audio/video cables (yellow plug) to connect the **VIDEO (CVBS)-OUTPUT** jack on the recorder to the video input jack (or labeled as A/V In, Video In or Composite) on the TV.

Option 2: Using an S-Video cable

- Use an S-video cable (not supplied) to connect the **S-VIDEO (Y/C) - OUTPUT** jack on the recorder to the S-Video input jack (or labeled as Y/C or S-VHS) on the TV.

Option 3: Using a Component Video cable

- 1 Use the component video cables (red/blue/green - not supplied) to connect the **Y Pb Pr -OUTPUT** jacks on the recorder to the corresponding component video input jacks (or labeled as Y Pb/Cb Pr/Cr or YUV) on the TV.
- 2 If your TV accepts Progressive Scan signal, see the chapter "DVD Setup Menu Options – PLAYBACK settings" for detailed set up.

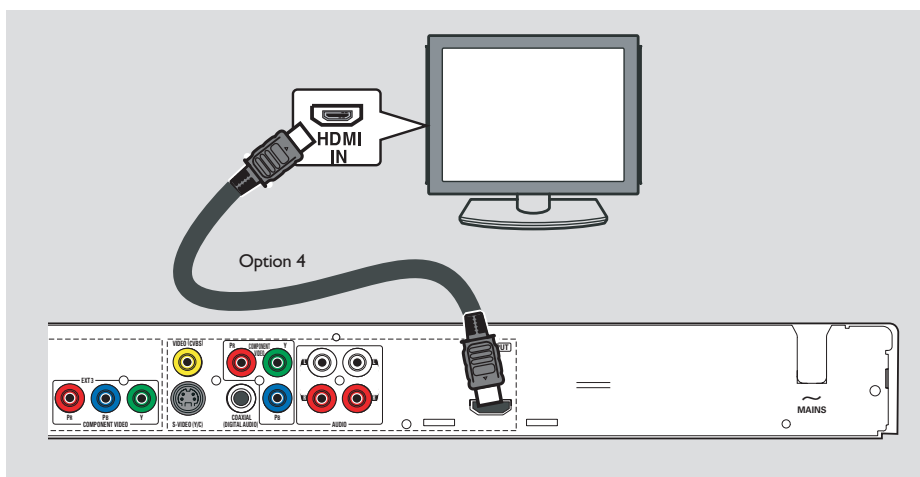
IMPORTANT!

The progressive scan video quality is only available through a Y PB PR connection and a progressive TV is required. It is strongly advised to complete the recorder installation first, before enabling the progressive scan feature.

For options 1 – 3, audio connection is required in order to hear the sound, see next section "Connecting the audio cables"

TIPS: Before making or changing any connections, make sure that all the devices are disconnected from the power outlet.

Step 1: Basic Recorder Connections (continued)



Option 4: Using a HDMI cable

HDMI (High Definition Multimedia Interface) is a digital interface that allows pure digital video transmission without the loss of image quality.

Note:

- Proper working is guaranteed with HDMI compliant products.
- When the HDMI cable is unplugged, the { **HDMI Video Resolution** } setting will automatically switch to default value {480i}.

- 1 Use an HDMI cable (not supplied) to connect the **HDMI OUTPUT** socket on this recorder to the HDMI IN on a HDMI compatible device (e.g. HDMI TV, HDCP compliant DVI TV.)

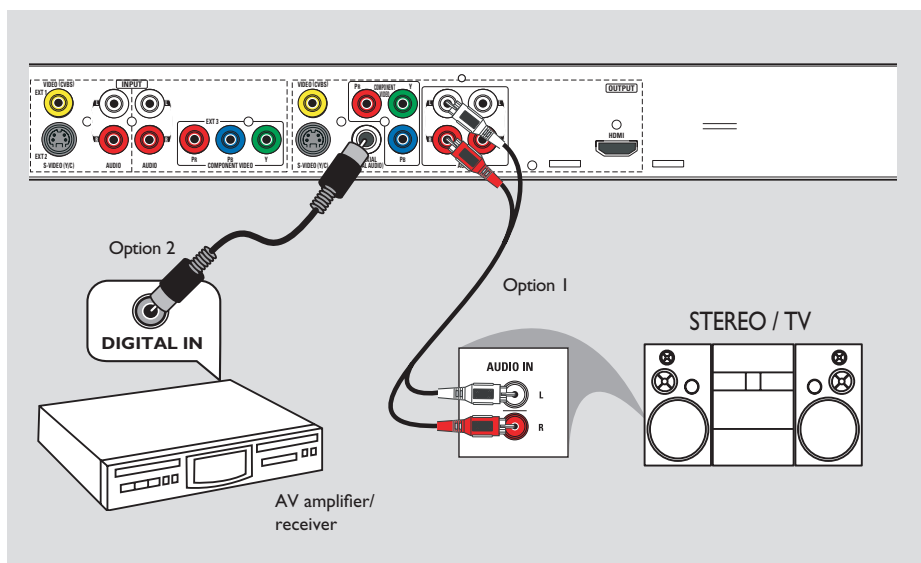
- 2 Once you have completed the necessary connections, installation and set-up, see chapter “DVD Setup Menu Options – PLAYBACK Settings”.

Helpful Hints:

- Digital devices from different manufacturers have the possibility of differing output standards which may cause difficulties for the television to properly display.
- The HDMI connector is only compatible with HDMI compliant devices and DVI-TV.

TIPS: Before making or changing any connections, make sure that all the devices are disconnected from the power outlet.

Step 1: Basic Recorder Connections (continued)



Connecting the audio cables

This connection enables you to listen to the playback from this recorder. However, this connection is not required if this recorder is connected to the TV using a HDMI cable.

Option 1: Using an audio cable

You can connect the recorder to a two channel stereo system (mini system, TV) or receiver in order to enjoy the stereo sound system.

- Use an audio cable (red/white ends) to connect the **AUDIO L/R OUTPUT** jacks to the audio input jacks of the connected device.

Option 2: Using a coaxial cable

You can connect the recorder to an AV amplifier/receiver with a digital multi-channel sound decoder in order to enjoy multichannel surround sound.

- Use a coaxial cable (not supplied.) Connect the **COAXIAL (DIGITAL AUDIO)** jack on the recorder to the digital input jack on the amplifier/receiver.

Before you start operating, set the digital audio output settings accordingly (see the section "PLAYBACK settings – Digital Audio Output").

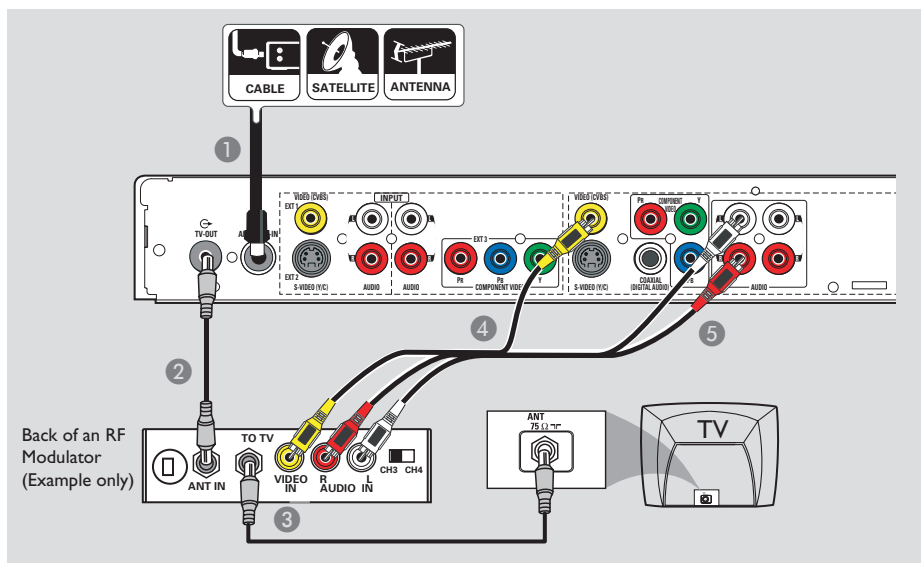
If the setting does not match your stereo's capabilities, the stereo may produce a strong, distorted sound or no sound at all.

Helpful Hint:

– Do not connect your TV's audio output jacks to the AUDIO-L/R INPUT jacks on this recorder, this may cause unwanted noise.

TIPS: Before making or changing any connections, make sure that all the devices are disconnected from the power outlet.

Step 2 : Optional Connections



TV has only an antenna input jack

Use this connection if your TV has only a single Antenna In jack (or labeled as 75 ohm or RF IN) and does not have any audio/video jacks.

For this connection, you need a RF modulator in order to view the disc playback.

- 1 You may have an Antenna/Cable TV signal (or from the Cable Box/Satellite Receiver/VCR) connected to your TV's antenna input jack (VHF/UHF RF IN.) Remove it from the TV and connect it to the **ANTENNA-IN** jack on the recorder.
- 2 Use the supplied RF coaxial cable to connect the **TV-OUT** jack on the recorder to the antenna input jack on the RF modulator.

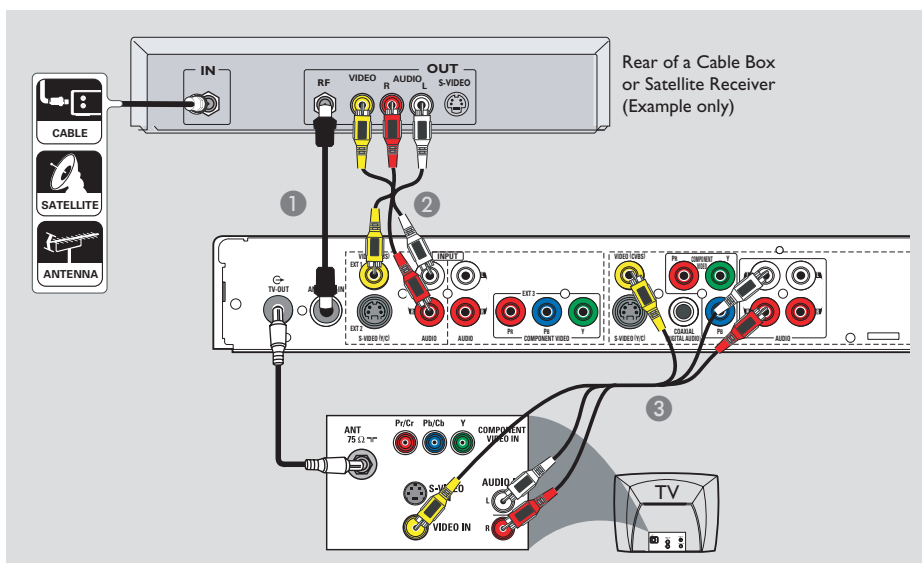
- 3 Use an RF coaxial cable (not supplied) to connect the **TO TV** jack on the RF modulator to the antenna input jack on your TV.
- 4 Use the supplied AV cables (yellow ends) to connect the **VIDEO (CVBS) - OUTPUT** jack on the recorder to the video input jack (or labeled as A/V In, Video In, Composite or Baseband) on the RF modulator.
- 5 Use the supplied AV cables (red/white ends) to connect the **AUDIO L/R - OUTPUT** jacks on the recorder to the audio input jack (or labeled as AUDIO IN or LINE IN) on the RF modulator.

Helpful Hints:

- If you have connected the **TO TV** jack on your RF modulator to your TV, set your TV to channel 3 or 4.
- See your electronics retailer for details on RF modulator availability and operations.

TIPS: Before making or changing any connections, make sure that all the devices are disconnected from the power outlet.

Step 2: Optional Connections (continued)



Connecting to a Cable Box or Satellite Receiver

Option 1

If your Cable Box/Satellite Receiver only has an antenna output jack (RF OUT or TO TV),

See "Step 1: Basic Recorder Connections – Connecting the antenna cables" for the complete connections to your TV.

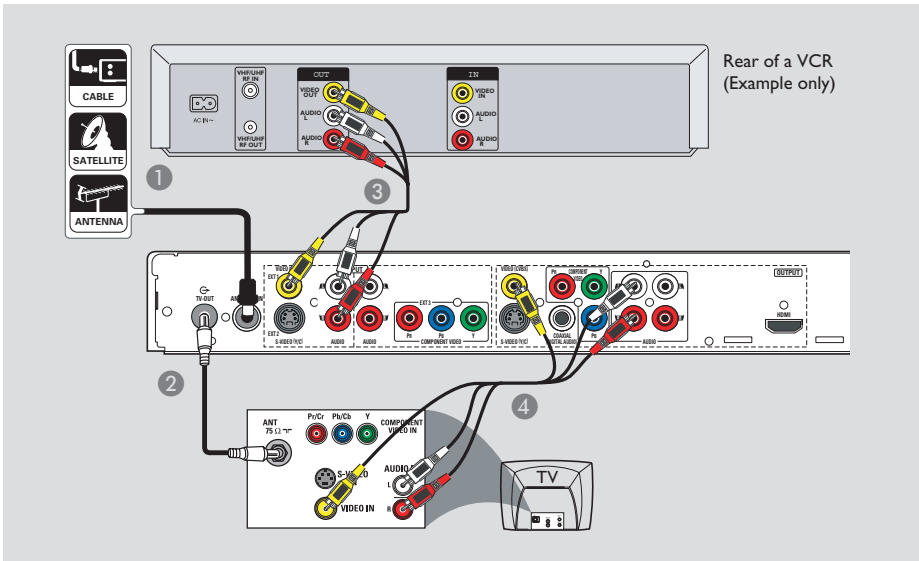
Option 2

If your Cable Box/Satellite Receiver has video/audio output jacks,

- 1 Keep the existing antenna connection from the Antenna/Cable TV signal to the Cable Box/Satellite Receiver.
- 2 Use the audio/video cables to connect the **VIDEO (CVBS) /AUDIO INPUT** jacks on the recorder to the matching VIDEO/AUDIO output jacks on the Cable Box/Satellite Receiver.
- 3 Use the audio/video cables to connect the **VIDEO (CVBS) /AUDIO OUTPUT** jacks on the recorder to the matching VIDEO/AUDIO input jacks on the TV.

TIPS: Refer to the respective connected device's user manual for other possible connections.

Step 2: Optional Connections (continued)



English

Connecting to a VCR or other similar device

This connection enables you to record from video tape to a DVD±R/±RW and allows the VCR to be used for playback if the recorder is turned off.

Before you start...

Your new recorder can replace the VCR for all your recording needs. Just unplug all the connections from your VCR.

- 1 Connect the Antenna/Cable TV signal to the **ANTENNA-IN** jack on the recorder.
- 2 Use a RF coaxial cable to connect the **TV-OUT** jack on the recorder to the antenna input jack on your TV (VHF/UHF RF IN.).

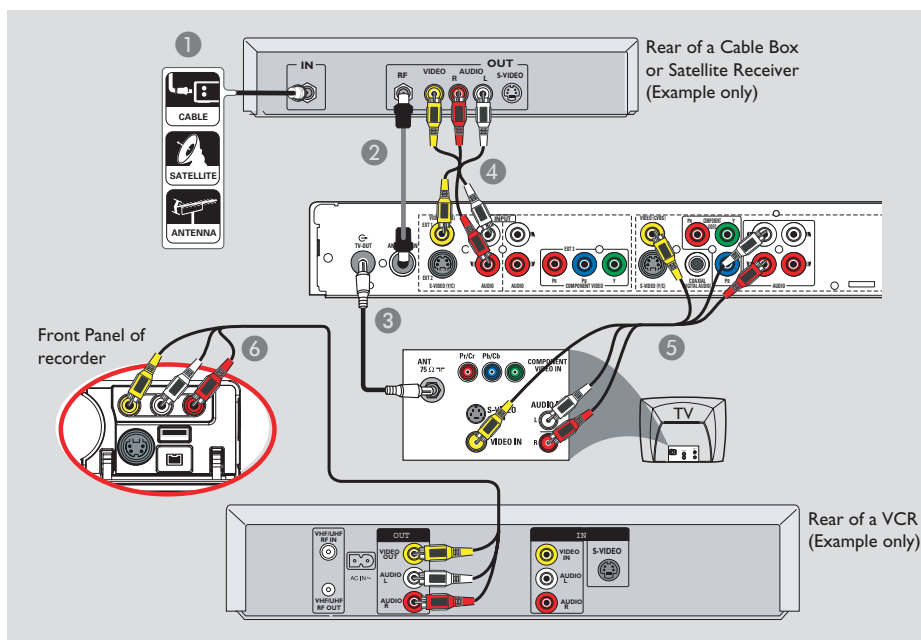
- 3 Use the audio/video cables to connect the **VIDEO (CVBS)/ AUDIO INPUT** (red/white/yellow) jacks on the recorder to the matching VIDEO/AUDIO output jacks on the VCR.
- 4 Use the audio/video cables to connect the **VIDEO (CVBS)/ AUDIO OUTPUT** (red/white/yellow) jacks on the recorder to the matching VIDEO/AUDIO input jacks on the TV.

Helpful Hints:

- Most commercial video cassettes and DVDs are copy-protected and therefore cannot be recorded.
- Connect the recorder directly to the TV. If there is a VCR or an additional device in between, the picture quality may be poor because of the copy protection system built into the recorder.

TIPS: Refer to the respective connected device's user manual for other possible connections.

Step 2: Optional Connections (continued)

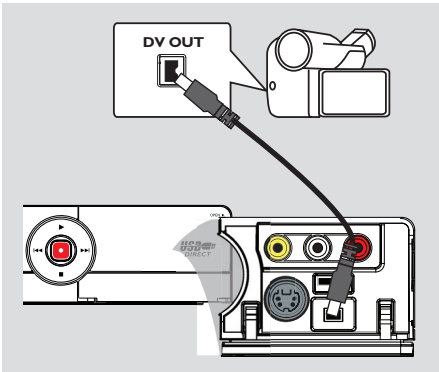


Connecting to a VCR and Cable Box/Satellite Receiver

- 1 Connect the Antenna/Cable TV signal to the antenna input (RF IN) jack on the Cable Box/ Satellite Receiver.
- 2 Use the supplied RF coaxial cable to connect the **ANTENNA-IN** jack on the recorder to the RF OUT jack on the Cable Box/ Satellite Receiver.
- 3 Use a RF coaxial cable (not supplied) to connect the **TV-OUT** jack on the recorder to the antenna input jack on your TV (VHF/UHF RF IN.).
- 4 Use the supplied audio/ video cables to connect the **VIDEO(CVBS) /AUDIO-INPUT** (red/white/yellow) jacks on the recorder to the matching VIDEO/AUDIO output jacks on the Cable Box/ Satellite Receiver.
- 5 Use the audio/video cables to connect the **VIDEO(CVBS)/AUDIO - OUTPUT** (red/white/yellow) jacks on the recorder to the matching VIDEO/ AUDIO input jacks on the TV.
- 6 Use another set of audio/video cables to connect the **CAM1/ L-AUDIO-R** jacks on the front panel of the recorder to the matching VIDEO/AUDIO output jacks on the VCR.

TIPS: Refer to the respective connected device's user manual for other possible connections.

Step 2: Optional Connections (continued)



Connecting a camcorder to the front jacks

You can use the front jacks to copy camcorder recordings. These jacks are located behind the flap on the right which provides convenient connections.

Option 1: Using the DV IN jack

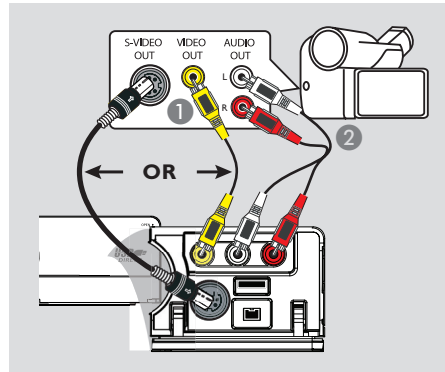
Use this connection if you have a Digital Video or Digital 8 camcorder. The DV jack conforms to the i.LINK standard.

- Use an i.LINK 4-pin cable (not supplied) to connect the **DV IN** jack on the front panel of the recorder to the appropriate DV OUT jack on the camcorder.

Before you start operating, press **SOURCE** on the remote control repeatedly to select 'DV' as the input channel.

Helpful Hints:

- The DV IN jack does not support a connection to a Personal Computer.
- It is not possible to record from the recorder to your camcorder via the DV IN jack on your recorder.



Option 2: Using the VIDEO In or S-VIDEO In jacks

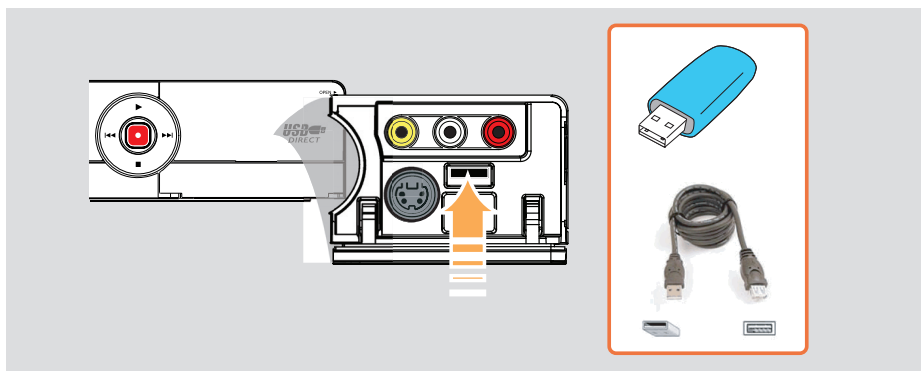
Use this connection if you have a Hi8 or S-VHS(C) camcorder or if your camcorder has only a single video output jack (Composite Video, CVBS.)

- 1 Use a video cable (not supplied) to connect the **CAM 1** jack on the front panel of the recorder to the Video output jack on the connected video device.
OR,
- Use an S-Video cable to connect the **CAM 2** jack if the connected video device has the S-Video output jack. It provides better picture quality.
- 2 Use an audio cable (not supplied) to connect the **AUDIO L/R** jacks on the front panel of the recorder to the audio output jacks on the connected video device.

Before you start operating, press **SOURCE** on the remote control repeatedly to select 'CAM1' or 'CAM2' as the input channel, depending on your connections.

TIPS: Refer to the respective connected device's user manual for other possible connections.

Step 2: Optional Connections (continued)



Connecting a USB flash drive or USB memory card reader

You can view the contents of a USB flash drive / USB memory card reader through this recorder and record the contents onto DVD±R/±RW. See the chapter “Recording – Archiving from a USB flash drive or USB memory card.”

- 1 Connect the USB flash drive / USB memory card reader directly to the **USB** port on the front panel (as shown in the above illustration.)
- 2 Press **USB** on the remote control to view the files stored in the USB flash drive or USB memory card reader.
- 3 To stop playback, press **STOP** ■ or remove the USB flash drive / USB memory card reader from the USB port.

Helpful Hints:

- The USB port only supports the playback of JPEG/MP3/WMA files.
- The USB port does not support the connection of other USB devices except to a USB flash drive / USB memory card reader.
- When the USB device does not fit into the USB port, a USB extension cable is required.

TIPS: Refer to the respective connected device’s user manual for other possible connections.


Step 3: Installation and Setup

Before you start...

When you complete the connections and turn on the recorder for the first time, it is advisable that you make several basic settings.

Please see the following pages on using the setup menu features to program TV channels, menu language and system clock settings. This will optimise the performance of this recorder.

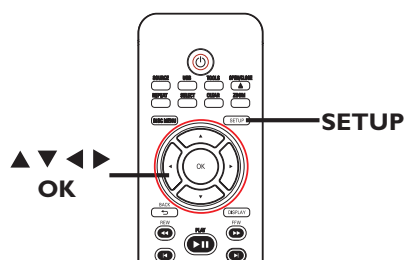
Finding the correct viewing channel




- 1 Press **STANDBY-ON** on the recorder to switch it on.
- 2 Turn on the TV and set it to the correct video-in channel. You should see the blue DVD background screen.
 - You may go to Channel 1 on your TV, then press the Channel Down button on your TV's remote control until you see the Video In channel.
 - You may press  button repeatedly on your TV's remote control.
 - Usually this channel is between the lowest and highest channels and may be called FRONT, A/V IN, VIDEO. See your TV manual for more details.
 - Or, set the TV to Channel 3 or 4 if you are using a RF modulator.

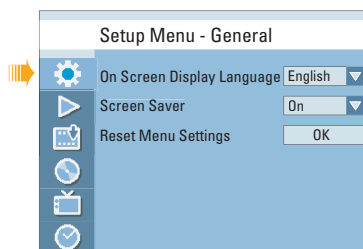
Setting the OSD language



Select the menu language for this recorder's on-screen display. The language options are different depending on your country or region. It may not correspond to the illustrations shown on the user manual.


Language settings can only be changed when there is no disc in the disc tray.



- 1 Press **SETUP**.
 - The setup menu appears.
- 2 Use  keys to highlight  { **Setup Menu - General** } and press  to access the menu.



- 3 Use  keys to highlight { **On Screen Display Language** } and press **OK** to access its options.
- 4 Use  keys to highlight the desired language and press **OK** to confirm.

TIPS: Press  to go access the options of an item in the menu.
Press **SETUP** to exit the menu.

Step 3: Installation and Setup (continued)

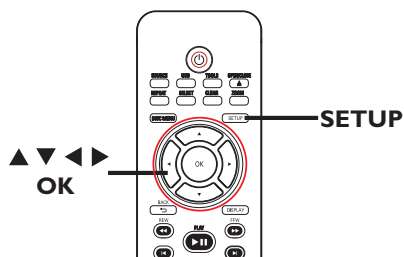
Setting your TV channel programs


Before the recorder can start recording the TV channel programs, you need to search for the available TV channels and store them in the recorder.

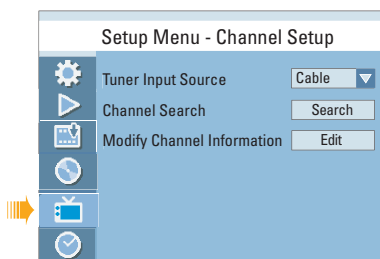
Tuner settings can only be changed when there is no disc in the disc tray.

Before you start ...

Make sure you have successfully made all the required connections to the recorder, the TV and Satellite Receiver/ Cable Box (if any) and turned them on.



- 1 Press **SETUP** on the remote control.
→ The setup menu appears on the TV.
- 2 Use **▲▼** keys to highlight  { **Setup Menu - Channel Setup** } and press **▶**.



- 3 Use **▲▼** keys to highlight { **Tuner Input Source** } and press **OK**.

{ **Cable** }

Select this if the DVD recorder is connected directly to the cable signal or through a set-top box.

{ **Air** }

Select this if the DVD recorder is connected directly to an indoor or outdoor antenna.

- 4 Press **OK** to confirm.
- 5 Select { **Channel Search** } and press **OK**.
→ The automatic TV channel search starts. This process may take several minutes. Once complete, the total number of channels found and stored appears on the TV.


To modify or sort the TV channels, see the chapter “DVD System Menu Options – CHANNEL SETUP settings.”

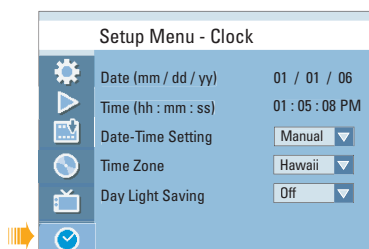
TIPS: Press **▶** to go access the options of an item in the menu.
Press **SETUP** to exit the menu.

Step 3: Installation and Setup (continued)

Setting the date & time

This recorder has an automatic date and time setting feature. If the recorder has not set the time and date correctly, you can further adjust the clock settings.

- 1 In setup menu, use ▲▼ keys to select  { **Setup Menu - Clock** } and press ►.



Adjust date and time manually

- 1 Use ▲▼ keys to highlight { **Date-Time Setting** } and press **OK** to access its options.
- 2 Use ▲▼ keys to highlight { **Manual** } press **OK** to confirm.

To adjust the date,

- 1 Select { **Date (mm/dd/yy)** } and press **OK** to edit the fields.
→ Use ▲▼ keys to change number and use ◀▶ keys to select different entry fields, then press **OK** to confirm.
- You can also use the **numeric keypad 0-9** on the remote control to key in the numbers.
- 2 Press **OK** to confirm.

To adjust the time,

- Select { **Time (hh:mm:ss)** }, repeat step ①~②.

Select Time Zone

- 1 Use ▲▼ keys to highlight { **Time Zone** } and press **OK** to access its options.
- 2 Use ▲▼ keys to highlight the zone of your location and press **OK** to confirm.

Enable Day Light Saving mode

- 1 Use ▲▼ keys to highlight { **Day Light Saving** } and press **OK** to access its options.
- 2 Use ▲▼ keys to highlight { **On** } press **OK** to confirm.
- To disable day light saving mode, highlight { **Off** } and press **OK** to confirm.
- 3 Press **SETUP** to exit the menu.

The basic installation is complete.

TIPS: Press ► to go access the options of an item in the menu.
Press **SETUP** to exit the menu.

Recording

Discs for recording

Several different types of recordable DVD discs can be used with this recorder:



DVD±RW (DVD ReWritable)

- Discs that are rewritable can be used for multiple recordings once the existing data is erased.



DVD±R (DVD Recordable)

- Discs can only be used for a single recording. Each new recording is always added at the end of all previous recordings as existing recordings cannot be overwritten.
- Editing can be done on DVD±R discs as long as they have not been finalized.
- To play a DVD±R on other DVD player, it must be finalized (see the chapter “Editing/ Finalizing Recording – Playing your recordings on other DVD players (DVD±R)”.) After this is done, no more data can be added to the disc.



DVD+R DL (DVD+R Double Layer)

- Like the DVD+R, these discs can only be used for a single recording. The only difference is the capacity- 8.5GB. It offers two recordable layers on a single DVD disc. The layers are accessible from the same side of the disc, so recording can occur completely uninterrupted.

Supported disc type and media speeds

Disc	Media speeds
DVD+R	1x - 16x
DVD+RW	2.4x - 4x
DVD-R	1x - 16x
DVD-RW	2.4x - 4x
DVD+R DL	2.4x

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See “Playing your recordings on other DVD players(DVD±R)”.

Recording (continued)

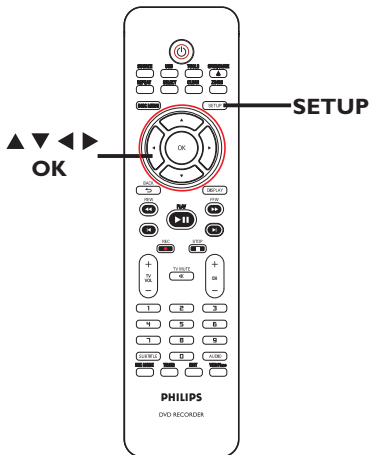
IMPORTANT!


Unrecordable contents

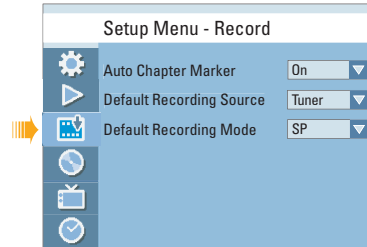
Contents with copy protection cannot be recorded on this recorder. When the recorder receives a copy guard signal, recording will be paused.

Recording settings

The default recording settings allow you to set auto chapter markers, preferred recording input source and recording mode. Any changes made using the remote control will only apply to the current recording settings. The default recording settings will remain unchanged for the next recording.



- ① Press **SETUP** on the remote control.
→ The setup menu appears on the TV.
- ② Use **▲▼** keys to select  { **Setup Menu - Record** } and press **▶** to confirm.



- ③ Use **▲▼** keys to select the setting you wish to change and press **OK** to confirm.
→ Instructions and explanations of the options are provided in the following pages.
- ④ To exit, press **SETUP**.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R) ".

Recording (continued)

RECORD settings (underlined options are the factory default settings)

Auto Chapter Marker

Automatically divides a recording (title) into chapters by inserting chapter markers at a specific interval. This enables you to access a specific point in the recording quickly.

- { On } – Chapter markers will automatically be inserted within the title during recording at every 5 minutes interval.
- { **Off** } – No chapter marker is inserted in the recording.

Default Recording Source

Define your frequent source of recording. The recorder will switch to the default source whenever it is turned on.

- { Tuner } – Input source from TV programs.
- { **CAM1** } – Input source from the device connected to the CAM1 and AUDIO L/R jacks on the front panel.
- { **CAM2** } – Input source from the device connected to the CAM2 and AUDIO L/R jacks on the front panel.
- { **DV** } – Input source from the device connected to DV IN jack on the front panel.
- { **EXT 1** } – Input source from the device connected to the EXT1 VIDEO jack on the rear panel.
- { **EXT 2** } – Input source from the device connected to the EXT2 S-VIDEO jack on the rear panel.
- { **EXT 3** } – Input source from the device connected to the EXT3 Y Pb Pr in jacks on the rear panel.

Note: To change the current recording source without changing the default setting, you can press the **SOURCE** button on the remote control.

Default Recording Mode

The recording mode defines the picture quality of recordings and the maximum recording time on a disc.

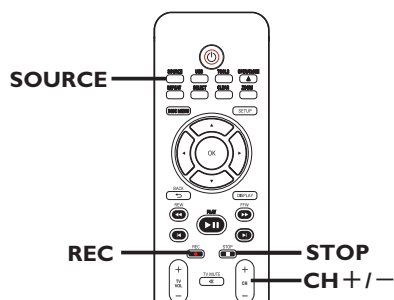
The factory default setting is **SP**.

Record Mode	Picture Quality	Maximum Recording Time per Disc (hours)
HQ	High Quality	1
SP	Standard Play	2
SPP	Standard Play Plus	2.5
LP	Long Play	3
EP	Extended Play	4
SLP	Super Long Play	6

Recording (continued)

Recording from various sources

You can record a TV program or copy the content from an external device to a recordable DVD disc. The storage capacity of the disc depends on the recording mode selected.



Recording TV programs

- 1 Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV'.)
- 2 Insert a recordable DVD into the recorder.
- 3 Press **SOURCE** on the remote control to select { **Tuner** }, then use **P** + / - keys to select the TV channel you wish to record.
- 4 Press **REC** ● to start recording.
 - If the disc contains some prior recordings, the new recording will automatically start after the last recording on the disc.
- To pause the recording, press **PLAY/PAUSE** ►||. To continue recording, press **REC** ●.
 - You can use this function to avoid recording commercials.
- 5 To stop the recording, press **STOP** ■.

Recording from an DV camcorder

Record video directly from a connected DV camcorder to a recordable DVD disc.

- 1 Connect the DV camcorder to **DV IN** jack on the front of the recorder.
- 2 Find the footage on the DV camcorder that you want to start recording and set the camcorder to pause mode.
- 3 Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV'.)
- 4 Insert a recordable DVD into the recorder.
- 5 Press **SOURCE** on the remote control to select { **DV** }.
- 6 Press **REC** ● to start recording and press the **PLAY** button on the DV camcorder to start playback.
 - To pause the recording, press **PLAY/PAUSE** ►|| once. To continue recording, press **REC** ● again.
- 7 To stop the recording, press **STOP** ■.
 - A new title will be created when you begin another recording.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R)".

Recording (continued)

Recording from an external device (Camcorder/VCR/DVD Player)

Record video directly from an external device to a recordable DVD disc.

Before you start...

Set the preferred mode of recording before proceeding. See the section "Recording Settings" in this chapter.

- ① Connect the external device to this recorder. See the chapter "Step 2: Optional Connections".
- ② Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV'.)
- ③ Insert a recordable DVD into the recorder.
- ④ Press **SOURCE** repeatedly to select the correct input channel that matches the connected jack of the device.

{ EXT 1 }

Input source from the device connected to the EXT1 - VIDEO jack on the rear panel.

{ EXT 2 }

Input source from the device connected to the EXT2 - S-VIDEO jack on the rear panel.

{ EXT 3 }

Input source from the device connected to the EXT 3 - Y Pb Pr in jacks on the rear panel.

{ CAM1 }

Input source from the device connected to the VIDEO and AUDIO L/R jacks on the front panel.

{ CAM2 }

Input source from the device connected to the S-VIDEO and AUDIO L/R jacks on the front panel.

- ⑤ Press **REC** ● to start recording.
→ Press **REC** ● repeatedly to toggle between OTR 30, 60 or 90- minutes recording options.
- ⑥ Start playback on the connected device.
 - To pause the recording, press **PLAY/PAUSE** ►|| once. To continue recording, press **REC** ● again.
→ You can use this function to avoid any unwanted recording.
- ⑦ To stop the recording, press **STOP** ■.

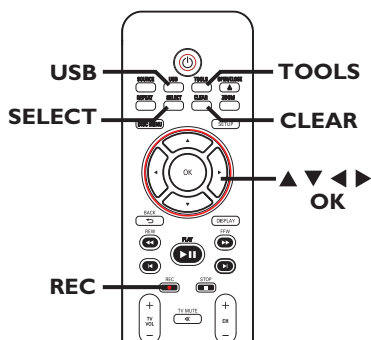
TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R only)".

Recording (continued)

English

Archiving from a USB flash drive or USB memory card reader

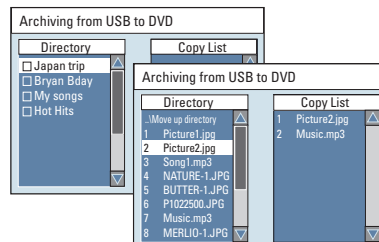
Archive the contents from a USB device to a recordable DVD disc.



- 1 Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV').
- 2 Insert a recordable DVD into the recorder. (Use a DVD disc only for data archiving. Do not use a disc with video recordings.)
- 3 Connect the USB flash drive / USB memory card reader to the **USB** port on the front panel of the recorder.
- 4 Press **USB** on the remote control to view the files stored in the USB flash drive or USB memory card reader.
- 5 Press **TOOLS** on the remote control.
→ The USB mode appears.

Audio	
Type	Audio
Mode	Normal
Audio	Stereo
Search	00:00:00 - 00:00:00
USB	Copy to DVD

- 6 Use **▲▼** keys to select { **Copy to DVD** } and press **OK**.
→ The USB drive content menu appears.



- 7 Use **▲▼** keys to navigate within the menu and press **OK** to access the folder/ album.
- 8 To create a copylist, highlight the track/ file and press **SELECT**.
→ The selected tracks/files will appear on the right { **Copy List** } screen.
→ To remove the track/file from the copy list, press **CLEAR**.
- 9 Once the copy list selection is complete, press **REC** to start archiving.
→ A message will appear. Select **OK** in the menu and press **OK** to proceed.

Helpful Hints:

- The USB port supports the playback of JPEG/MP3/WMA/DivX files.
- The USB port does not support the connection of other USB devices except to a USB flash drive / USB memory card reader.
- If the USB device does not fit into the USB port, a USB extension cable is required.
- It is not possible to record content from a DVD disc to the USB drive.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R only)".

Recording (continued)

Instant time-off recording

This function allows you to make a recording with a preset length easily without using the timer programming.

- ① Press **REC** ● **repeatedly** to toggle between OTR 30, 60 or 90- minutes recording options.
- ② The recorder will stop recording at the designated end time and turn off to standby mode automatically.
- If you wish to stop the recording before the scheduled time, press **STOP** ■.

Watching another TV program during recording

You can watch another TV channel while recording is in progress by using the TV's remote control to change the TV channels.

Helpful hint:

– Remember to turn the TV back to its video input channel if you want to watch the TV channel through the recorder or playback the recorded disc.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R only)".

Timer Recording

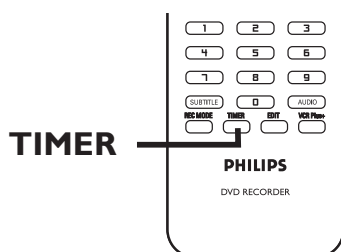
About timer recording

Use the timer recording to automatically start and stop a recording at a later date/time. The recorder will tune to the right program channel and begin recording at the specified time.

With this recorder, you can schedule up to **20 recordings** at a time. During timer recording, changing the channel that is being recorded is not possible.

There are two ways to program a timer recording

- Using the VCR Plus+® system.
- Using manual timer schedule.

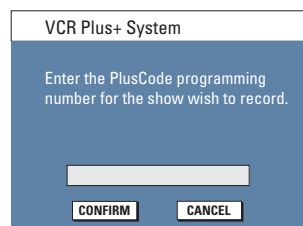


Timer recording (VCR Plus+® System)

This is a simple timer programming system. To use it, enter the PlusCode programming number associated with your television program. You can find this number in your TV listings magazine.

All the information required by this recorder for programming is contained in the programming number.

- 1 Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV'.)
- 2 Press **VCR Plus+** on the remote control.
→ The VCR Plus+® System menu appears.



- 3 Use the **numeric keypad 0-9** to enter the PlusCode programming number for the show you wish to record.
(e.g. : 5-312-4 or 5,312 4, key in '53124'.)
- To clear the PlusCode programming number, press **CLEAR** on the remote control.
- To cancel the PlusCode programming, use ▲▼ keys to select **CANCEL** in the menu and press **OK**.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings on other DVD players(DVD±R only)".

Timer Recording (continued)

- ④ To confirm your entry, select **CONFIRM** in the menu and press **OK**.

→ The VCR Plus+® program information will be shown on the timer editor menu.

Timer Editor 09 : 30 : 50 PM

Source	Ch003
Rec Mode	SP
Mode	Once
Date	01 / 01 / 06
Start	10 : 30 PM
End	11 : 00 PM

OK CANCEL

- If the channel number of the TV program has not been assigned to the programming number, you will have to manually key in the channel number that is assigned to the PlusCode. Follow the instructions on the TV.

- ⑤ Press **TIMER** to exit the menu.

- ⑥ Insert a recordable DVD into the recorder.

- ⑦ Press **STANDBY-ON** to turn off the recorder to standby mode.
 → The 'TIMER' icon will light up on the display panel if a timer recording is set.
 → If the recorder is not in standby mode, a notification message will appear three minutes before the recording begins.

Timer recording (manually)

- ① Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV').

- ② Press **TIMER** on the remote control.
 → The timer schedule appears.

Timer Schedule 09 : 30 : 50 PM

	Source	Rec Mode	Date	Start	End
1	CH003	SP	05/01/06	02:00pm	03:30pm
2	CH010	SPP	02/03/06	05:00pm	06:30pm
3	CH008	SP	10/04/06	01:00am	01:30am
4	CH005	SP	02/09/06	12:30pm	02:15pm
5					
6					

- ③ Select an empty field and press **OK**.
 → The timer editor menu appears.

Timer Editor 09 : 30 : 50 PM

Source	Ch003
Rec Mode	SP
Mode	Once
Date	01 / 01 / 06
Start	10 : 30 PM
End	11 : 00 PM

OK CANCEL

- ④ Use **▲▼** keys or the **numeric keypad 0-9** to select or enter the recording information, then press **OK** to confirm.

{ Source }

Select the TV channel or the correct input source (DV,EXT1, EXT2, EXT3, CAM1 or CAM2) which you have used to connect the external device.

{ Rec Mode }

Select the mode of recording.

See the chapter "Recording – RECORD settings - Default Recording mode" for more information.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings (DVD±R) on other DVD players".

Timer Recording (continued)

{ Mode }

Select a desired repeat recording mode (Once, Daily, Weekly, Mon-Fri, Mon-Sat or Weekend.)

{ Date }

Enter the date for recording (Month/Day/Year.)

{ Start }

Enter the start time of recording (hours : minutes.)

{ End }

Enter the end time of recording (hours : minutes.)

- 5 Use **▲▼** keys to select **OK** in the menu and press **OK**.
→ The system will store the timer entry and return to the timer schedule list.
- To cancel the above timer setting, move to **CANCEL** in the menu and press **OK**.
- 6 Press **TIMER** to exit the menu.
- 7 Insert a recordable DVD into the recorder.
- 8 Press **STANDBY-ON** to turn off the recorder to standby mode.
→ The 'TIMER' icon will light up on the display panel if a timer recording is set.
→ If the recorder is not in standby mode, a notification message will appear three minutes before the recording begins.

Helpful Hint:

– Set the timer recording one minute ahead of the program's start time. This helps ensure the entire program is recorded as the disc requires about 30 seconds to prepare for recording.

Setting a timer recording from an external Cable Box/ Satellite Receiver

If you have a Satellite Receiver/Cable Box connected to this recorder via the EXT2 S-VIDEO or EXT3 Y Pb Pr connection (see "Step 2: Optional Connections"), follow the steps described below to program the recordings.

- 1 Select the channel you want to record at the Satellite Receiver/Cable Box.
 - 2 Program the recording with the required information. Follow the steps 1~8 of "Timer Recording (manually)" on the previous page.
- Note:** In { Source } entry, select { EXT 2 } or { EXT 3 } as the input source for recording.
- 3 Leave the Satellite Receiver/Cable Box turned on for the recording.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings (DVD±R) on other DVD players".

Timer Recording (continued)

Changing/ Deleting a timer recording

- ① Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV'.)
- ② Press **TIMER** on the remote control.
→ The timer schedule appears.

Timer Schedule 09 : 30 : 50 PM					
	Source	Rec Mode	Date	Start	End
1	CH003	SP	05/01/06	02.00pm	03.30pm
2	CH010	SPP	02/03/06	05.00pm	06.30pm
3	CH008	SP	10/04/06	01.00am	01.30am
4	CH005	SP	02/09/06	12.30pm	02.15pm
5					
6					

- ③ Use ▲▼ keys to select a timer program which you want to change/ delete.
- ④ To delete the timer entry, press **CLEAR** on the remote control.
- ⑤ To change the timer schedule, press **OK** to enter the timer editor menu of the selected timer program.

Timer Editor 09 : 30 : 50 PM	
Source	Ch003
Rec Mode	SP
Mode	Once
Date	01 / 01 / 06
Start	10 : 30 PM
End	11 : 00 PM
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

- ⑥ Select the entry field and make the necessary changes.
- ⑦ Once complete, select in the menu and press **OK**.
- ⑧ Press **TIMER** to exit the menu.

TIPS: Ensure that there is enough space on the DVD±R/±RW before recording. Before you playback the DVD±R on another player, finalize the disc. See "Playing your recordings (DVD±R) on other DVD players".

Playable discs

Using this recorder, you can playback and record on the following discs:

Recording and Playback

DVD±RW

(DVD Rewritable);
can be recorded on
over and over again.



DVD±R

(DVD Recordable);
can be recorded
on only once.



DVD+R DL

(DVD+R Double
Layer); can be recorded on
only once.



Playback only:

DVD Video (Digital Versatile
Disc)



CD-RW (CD-Rewritable)
Audio/ MP3/WMA JPEG contents



CD-R (CD-Recordable)
Audio/ MP3/WMA JPEG contents



Audio CD (Compact Disc
Digital Audio)



MP3/WMA-Disc



Video CD
(Formats 1.0, 1.1, 2.0)



Super Video CD



DivX Disc
(DivX 3.11, 4.x, 5.x, 6)



IMPORTANT!

- If the inhibit icon (Error) appears on the TV screen when a button is pressed, it means the function is not available on the current disc or at the current time.
- DVD discs and players are designed with regional restrictions. Before playing a disc, make sure the disc is for the same region as your player.
- Do not push on the disc tray or put any objects other than discs on the disc tray. It may cause the disc player to malfunction.

TIPS: Some discs cannot be played on this recorder due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.

Playback (continued)

Starting disc playback

- ① Press **STANDBY-ON** to turn on the recorder.
 - ② Press **OPEN/CLOSE ▲**.
→ The disc tray opens.
 - ③ Place the disc onto the tray with the label facing up, then press **OPEN/CLOSE ▲**.
 - ④ Turn on the TV to the correct viewing channel for the recorder (e.g. 'EXT', '0', 'AV').
 - ⑤ Playback may start automatically or a dialog box will appear on the TV (see next page.)
- If the pin code entry dialog appears on the TV, this means that the parental control was activated for the inserted disc. You have to enter your four-digit pin code (see "DVD Setup Menu Options – DVD Settings").
 - For more playback features, see "Additional Playback Features".

Playing a DVD video disc

The DVD disc is usually formatted with a disc menu. You may have to make your selection (e.g., subtitle or audio language) within the disc menu.

- ① Insert a DVD disc.
- If the disc menu appears, use the **numeric keypad 0-9** to input your selection or use **▲▼** keys to select a play option and press **OK** to start playback.

To access the disc menu

- Press **DISC MENU** on the remote control.

To select the previous or next chapter

- During playback, press **◀** or **▶**.
- ② To stop playback, press **STOP ■**.

Playing an audio CD

- ① Insert an audio CD.
→ Playback starts automatically.
→ The track number and elapsed playing time appear on the display panel.
- ② To stop playback, press **STOP ■**.

TIPS: Some discs cannot be played on this recorder due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.

Playback (continued)

Playing a (Super) Video CD

(Super) Video CDs may feature 'PBC' (Play Back Control.) This allows you to play the video CDs interactively by following the menu on the display.

- 1 Insert a (Super) Video CD.

If the 'PBC' is on, the disc index menu will appear on the TV

- 2 Use **numeric keypad 0-9** to input your selection or to select a play option.
 - To return to the previous menu, press **BACK** on the remote control.
 - To turn on/off the Playback Control mode, press **TOOLS** on the remote control during playback to access the VCD menu. Then use **▲▼** keys to select { **PBC On** } or { **PBC Off** }.
- 3 To stop playback, press **STOP** .

Playing a recordable DVD disc

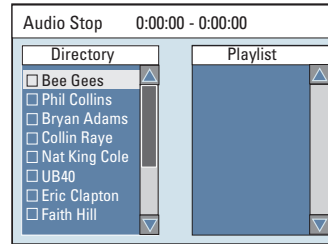
- 1 Insert a recordable DVD disc.
 - The Index Picture screen appears.
- 2 Use **▲▼** keys to select a title to play, then press **PLAY/PAUSE** .
- 3 To stop playback, press **STOP** .

Helpful Hint:

– If the message 'BLANK' appears on the display panel, this means that there are no recordings on this disc.

Playing an MP3/WMA disc

- 1 Insert an MP3/WMA CD.
 - The disc content menu appears.



Note: It may require a longer time for the recorder to display the disc content menu on the TV due to the large number of songs/pictures compiled into one disc.

- 2 Use **▲▼** keys to navigate within the menu and press **OK** to access the folder/album.
- 3 Use **▲▼** keys to select the track/file to play.
 - To move up to the previous level, press **BACK** .
- 4 To create a playlist, highlight the track/file and press **SELECT**.
 - The selected tracks/files will appear on the right screen.
 - To remove the track/file from the playlist, press **CLEAR**.
- 5 To start playback from the playlist, move the cursor to the right selection screen and press **▶II**.
- 6 During playback, you can press **◀/▶** to select the next/previous track.
- 7 To stop playback, press **STOP** .

Helpful Hints:

– Only the first session of a multi-session CD will playback.
 – This recorder does not support MP3PRO audio format.

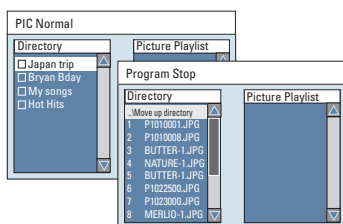
TIPS: Some discs cannot be played on this recorder due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.

Playback (continued)

Playing a picture disc (or musical slide show)

You can display JPEG pictures in the selected roll automatically one after the other.

- 1 Insert a JPEG picture disc (CD, CD-R/RW, DVD±R/±RW.)
→ The disc content menu appears.
- 2 Use ▲▼ keys to navigate within the menu and press **OK** to access the folder/ album.
- 3 To create a playlist, highlight the track/file and press **SELECT**.
→ The selected tracks/files will appear on the right screen.
→ To remove the track/file from the playlist, press **CLEAR**.
- 4 You can select to playback from the original disc content or from the playlist, just use ◀▶ keys to move to the correct screen before selecting the track/ file for playback.



If the disc contains MP3/WMA music and JPEG picture files, you can start a musical slide show playback,

- Select an MP3/WMA file and press **OK** to start playback, then select a picture file in the menu and press **OK** to start the musical slide show playback.

- 5 During playback, press **TOOLS** twice on the remote control to access various settings for the slide show playback.

File Play	
Type	PIC
Mode	Normal
Wipe	Top to bottom
Zoom	Fitscreen
Rotate	Clockwise 0

Top to bottom
Down to top
Left to right
Right to left
Extend center V.

- 6 To stop playback, press **STOP** ■.

Playable JPEG picture disc

File format:

- The file extension has to be '.JPG,' '.JPE' or '.JPEG.'
- Only DCF-standard still pictures or JPEG pictures e.g. TIFF are supported.
- Moving pictures, Motion JPEG, progressive JPEG, pictures in non-JPEG formats and including pictures associated with sound are not supported.

TIPS: Some discs cannot be played on this recorder due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.

Playback (continued)

Playing a DivX disc

This recorder supports the playback of DivX movies which you can copy from your computer onto a CD-R/RW, DVD±R/±RW or USB flash drive.

- ① Insert a DivX disc.
→ The disc content menu appears.
- If there are external subtitles available on the disc, you have to first select the subtitle file from the file list.
- ② Press **PLAY/PAUSE ►II** to start playback.
- During playback, you can press **TOOLS** to display the disc content menu.

Helpful Hints:

- Subtitle files with the following filename extensions (.srt, .smi, .sub, .sami) are supported.
- It is normal to experience an occasional pixelation during DivX playback due to poor clarity of digital contents during internet downloading.

Playing from a USB flash drive /USB memory card reader

This USB port supports the playback of JPEG/MP3/WMA and DivX files.

- ① Insert a USB flash drive or USB memory card reader into the USB port.
- ② Press **USB** on the remote control to access the data in the drive.
→ The content menu appears on the TV.
- ③ Use **▲▼** keys to navigate within the menu and select the file you want to play, then press **OK**.
→ For more playback information, refer to the chapters on MP3/WMA and DivX playback in this user manual.
- ④ To stop playback, press **STOP ■** or remove the USB flash drive / USB memory card reader from the USB port.

TIPS: Some discs cannot be played on this recorder due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.

Additional Playback Features

Changing to another chapter/track

When a disc contains more than one track, title or chapter, you can change to a different track or chapter as follows.

During playback,

- Press **▶|** (NEXT) to go to the next chapter/track.
- Press **◀|** (PREV) to return to the start of the previous chapter/track.
OR
- Use the **numeric keypad 0-9** to input the title/chapter/track number.
OR
- Press **TOOLS** to enter the file play (DVD, VCD) menu and use **▲▼** keys to select { **Title** } or { **Chapter** } and use **numeric keypad 0-9** to input the title/chapter/track number.

Pausing playback

- ① During playback, press **PLAY/PAUSE ▶||** to pause playback.
- ② To resume normal playback, press **▶||** again.

Searching forwards/backwards

You can fast forward or fast reverse a disc at two, four, sixteen or thirty two times the normal playback speed.

- ① During playback, press **◀◀** (REW) or **▶▶** (FFW) to switch to the search function.
→ The search status bar appears. It displays the search speed.
→ The sound will be muted.
- ② Press **◀◀** (REW) or **▶▶** (FFW) to cycle through the search speeds.
- ③ To resume normal playback, press **PLAY/PAUSE ▶||**.

Zooming in

(Only available during playback of still picture discs.)

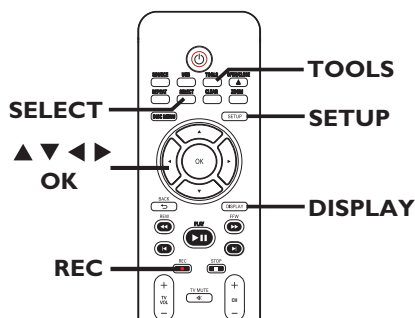
This option allows you to enlarge the picture on the screen and pan through the enlarged picture.

- ① Press **ZOOM** repeatedly on your remote control to activate zoom.
- ② Use **◀▶▲▼** keys to pan through the zoomed picture.
- ③ To exit, press **ZOOM** until the picture returns to the normal size.

TIPS: The operating features described here might not be possible for certain discs. Always refer to the instructions supplied with the discs.

Additional Playback Features (continued)

Using the **TOOLS** options



Menu options displayed may differ depending on the disc type.

- 1 During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.

DVD	00:22:03 / 01:30:26
Mode	Normal
Title	01/02
Chapter	03/12
Audio	01/02 - OTH
Subtitle	Off
Angle	01/03
Title	00:22:03 / 01:30:26

- 2 Use **▲▼** keys to select the setting you want to adjust.
→ Instructions and explanations of the options are provided in the following pages.
→ If the selection in the menu is greyed out, that means the feature is not available or cannot be changed in the current state.
- Press **DISPLAY** on the remote control to hide or show the DVD menu.
- 3 To exit, press **TOOLS**.

Selecting various repeat/ shuffle functions

You can select various repeat play or random play mode during playback.

- During disc playback, press **REPEAT** repeatedly to toggle through the options on the disc.
OR,
- 1 During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- 2 Use **▲▼** keys to select { **Mode** } and press **OK**.
- 3 Use **▲▼** keys to select one of the repeat options.
 - { **Repeat A-B** } (DVD/VCD)
Repeat the playback of a specific segment within a title/chapter/track. Press **OK** to mark the start and end of the segment you want to repeat.
 - { **Repeat Chapter** }
Repeat playback of the current chapter (DVD, DVD±R/±RW only.)
 - { **Repeat Track/Title** }
Repeat playback of the current track/title.
 - { **Repeat Directory** }
Repeat playback of the current folder/ directory (MP3, JPEG, picture disc only.)
 - { **Repeat Disc** }
Repeat playback of the entire disc. (MP3, JPEG, SVCD and CDDA discs only.)
 - { **Shuffle** }
Randomly playback all the tracks within the disc (MP3 and audio CD only.)
 - { **Normal** }
Cancel the repeat or programmed modes and return to normal playback.
- 4 To cancel repeat playback, press **STOP** ■ or select { **Normal** } and press **OK**.

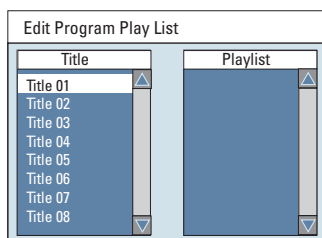
TIPS: The operating features described here might not be possible for certain discs. Always refer to the instructions supplied with the discs.

Additional Playback Features (continued)

Creating a playlist

You can play the contents of the disc in the order you want by creating a playlist.

- ① During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- ② Select { **Mode** } > { **Program** }.
→ The program menu appears.



- ③ If the disc is recorded with Titles/Folders/Albums, press **OK** to access the tracks/files/chapters.
- ④ Use ▲▼ keys to select the track/file/chapter and press **SELECT** on the remote control.
→ The selected track/ file/ title will appear in the { Playlist } screen at the right.

To remove from the playlist

- ⑤ Move to the right screen, select the item to remove and press **CLEAR** on the remote control.
- ⑥ To start playback from the playlist, move to the right screen and press **OK**.
→ Playback will start from the selected track/ file/ chapter according to the order of the playlist.
- ⑦ To exit playlist play, press **STOP** ■.

Changing the audio language

This operation works only on DVDs with multiple soundtrack language or VCDs with multiple audio channels.

- During disc playback, press **AUDIO** repeatedly to toggle through the audio channels on the disc.

OR,

- ① During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- ② Use ▲▼ keys to select { **Audio** } and press ► to access its options.
- ③ Use ▲▼ keys to select the audio language and press **OK** to confirm.
→ The languages may be numbered or abbreviated, such as "En" for English.
→ If the language selected is not available on the disc, the disc's default setting for language will be used instead.

Helpful Hint:

– Some DVDs allow soundtrack language changes only via the DVD disc menu. To access the Disc Menu, press **DISC-MENU**.

TIPS: The operating features described here might not be possible for certain discs. Always refer to the instructions supplied with the discs.

Additional Playback Features (continued)

Changing subtitle languages

This operation works only on DVDs with multiple subtitle languages, you can change the language you want while playing the DVD.

- During disc playback, press **SUBTITLE** repeatedly to toggle through the language options on the disc.

OR,

- ① During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- ② Use ▲▼ keys to select { **Subtitle** } and press ► to access its options.
- ③ Use ▲▼ keys to select the language and press **OK** to confirm.
→ The languages may be numbered or abbreviated, such as “En” for English.
→ If the language selected is not available on the disc, the disc’s default setting language will be used instead.

Helpful Hint:

– Some DVDs discs allow subtitle language changes only via the DVD disc menu. To access the disc menu, press **DISC-MENU**.

Switching camera angles

This option is only available with DVDs that contain sequences recorded from different camera angles. This allows you to view the picture from different angles.

- ① During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- ② Use ▲▼ keys to select { **Angle** } and press ► to enter its options.
→ The camera angles available for selection appears.
- ③ Use ▲▼ keys to select the camera angle you want to switch to, and press **OK** to confirm.

Searching by time

This option allows you to skip to a specific point on the current disc.

- ① During disc playback, press **TOOLS** on the remote control.
→ The Tools menu appears.
- ② Use ▲▼ keys to select { **Search** } and press ► to time field (hours : minutes : seconds.)
- ③ Use the **numeric keypad 0-9** to enter the time where playback should start and press **OK**.
→ Playback skips to the time entered.

TIPS: The operating features described here might not be possible for certain discs. Always refer to the instructions supplied with the discs.

Editing/ Finalizing Recording

About disc editing

This recorder offers various disc edit options for various disc types. You can change the disc content and settings of a recorded DVD from the disc editing menu. The edited contents may not be available when you play the disc on another DVD player.

The displayed options in the disc editing menu differ depending on the type of disc.

{ Play }

Start playback from the beginning of the disc.

{ Rename Disc }

Change the name of the disc.

{ Erase Disc } - DVD±RW only

Erase all the recordings on the disc.

{ Record New Title }

Start recording from the last empty title on the disc.

{ Overwrite Disc } - DVD±RW only

Start a new recording from the beginning of the disc, all the recorded content will be overwritten.

{ Make Compatible } - DVD±RW only

To ensure the edited changes remain when the disc is played back on another DVD player. (eg., hidden chapters to remain hidden.)

{ Lock/Unlock Disc } - DVD±RW only

Lock or unlock a disc to prevent accidental erasure or changes being made.

{ Finalize Disc } - DVD±R only

Finalize the disc to enable playback on other DVD players. Further recording and editing to the disc are not allowed. It is not possible to unfinalize the disc.

Accessing disc editing menu

- 1 Insert a recorded DVD into the recorder.
→ The Index Picture screen appears on the TV.
- 2 Select the first title on the disc, press ▲ on the remote control.
→ The disc editing menu appears.
- 3 Press ► on the remote control to display the disc editing options.
→ The available editing options are different for DVD±R and DVD±RW discs.



- 4 Use ▲▼ keys to access different options and **OK** to select.
→ Instructions and explanations of the options are provided in the following pages.
- 5 To exit from the disc editing menu, press ◀ once to exit from the disc editing menu. Press ▼ to return to the disc Index Picture menu.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press ◀ to go back to the previous menu. Press **DISC MENU** to exit.

Editing/ Finalizing Recording (continued)

Rename disc

The original disc name is generated automatically by the recorder. You can change the disc name by following the steps below.

- ① In disc editing menu, use ▲▼ keys to select { **Rename Disc** } and press **OK**.
→ The keyboard screen appears.
- ② Use ◀▶▲▼ keys to highlight a character on the keyboard and press **OK** to select.
→ The maximum input is up to 20 characters.
- You can use the following keys on the keyboard screen to edit your input:
 - : to remove the character to the left of the cursor.
 - : to remove the character to the right of the cursor.
 - : to create a space between characters.
 - : to toggle between upper and lower case characters.
 - : to clear the entry field completely.
- ③ To confirm your entry, select on the keyboard and press **OK**.
→ The info panel is now updated.
- To cancel the changes, select on the keyboard and press **OK**.

Erase disc (DVD±RW only)

This erases the content of the DVD±RW including those that was not recorded on this recorder. Once the existing content is erased, it can be used for recording.

- ① In disc editing menu, use ▲▼ keys to select { **Erase Disc** } and press **OK**.
→ A warning message will appear.
- ② Select in the menu to proceed or to abort, then press **OK** to confirm.

Record new title

This function allows you to start a new recording at the remaining empty space in the DVD±RW.

- ① In disc editing menu, use ▲▼ keys to select { **Record New Title** } and press **OK**.
- ② Select the source you want to record from and press **REC** ● to start recording.

Overwrite disc (DVD±RW only)

This function allows you to start a new recording from the beginning of a DVD±RW regardless of the contents of the disc.

- ① In disc editing menu, use ▲▼ keys to select { **Overwrite disc** } and press **OK**.
- ② Select the source you want to record from and press **REC** ● to start recording.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R.
Press ◀ to go back to the previous menu. Press **DISC MENU** to exit.

Editing/ Finalizing Recording (continued)

Make compatible (DVD±RW only)

The edited DVD±RW may still display the original titles or hidden scenes when played back on other DVD players. This function ensures that the edited changes of the DVD±RW remain when played back on other players.

- In disc editing menu, use ▲▼ keys to select { **Make Compatible** } and press **OK** to confirm.

Helpful Hint:

– If the option {Compatible} is not available for selection, it means that the disc is already compatible.

Lock/Unlock disc (DVD±RW only)

You can choose to protect the recorded DVD±RW in order to prevent accidental loss of recordings.

- 1 In disc editing menu, use ▲▼ keys to select { **Lock Disc** } and press **OK**.
→ The disc is locked for this DVD recorder only.
→ When the disc is locked, the option in the disc editing menu will change to { **Unlock Disc** }.
- 2 If you want to overwrite or edit on the protected disc, select { **Unlock Disc** }.

Playing your recordings on other DVD players (DVD±R only)

It is necessary to finalize a DVD±R disc before you can play it on another DVD player. Otherwise, the DVD±R will only playback on this recorder.

After a DVD±R disc has been finalized, no further recordings or editing can be made to it. Make sure that you have completed all the recordings and editing before finalizing the disc.

- 1 In disc editing menu, use ▲▼ keys to select { **Finalize Disc** } and press **OK**.
→ A warning message will appear.
 - 2 Select in the menu and press **OK** to start the process.
→ Finalization will take a few minutes, depending on the length of recordings.
→ Do not try to open the disc tray or turn off the power as this may render the disc unusable.
- Otherwise, select in the menu and press **OK** to abort the operation.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press ◀ to go back to the previous menu. Press **DISC MENU** to exit.

Editing/ Finalizing Recording (continued)

About title editing

You can change the individual title information or delete a title (recording) in a recorded DVD. If a DVD±R has been finalized, it cannot be edited.

The displayed options in the title editing menu differ depending on the type of disc.

{ Play Title }

Start playing a recording.

{ Edit Title }

Access the video editing menu.

{ Rename Title }

Change the name of the recording.

{ Erase Title } - DVD±RW only

Delete the title (recording.)

{ Overwrite Title } - DVD±RW only

Start a new recording, the existing title (recording) will be overwritten.

{ Overwrite Disc } - DVD±RW only

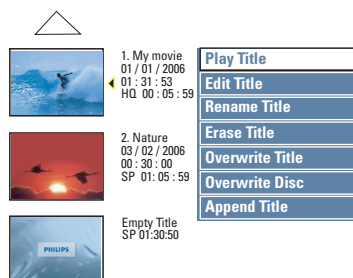
Overwrite from the selected title onwards to the end of the disc.

{ Append Title }

Insert a new recording to the last existing recording.

Accessing title editing menu

- ① Insert a recorded DVD into the recorder.
→ The Index Picture screen appears on the TV.
- During playback, press **DISC MENU** to access the Index Picture screen.
- ② Use **▲▼** keys to highlight a title (recording), and press **▶**.
→ The title editing menu appears.



- ③ Use **▲▼** keys to access different options and **OK** to select.
→ Instructions and explanation of the options are provided in the following pages.
- ④ To exit, press **◀**.

Video editing

This feature allows access to the video editing menu. See the chapter “Editing/ Finalizing Recording – About video editing” for more information.

- In title editing menu, use **▲▼** keys to select { **Edit Title** } and press **OK**.
→ The video editing menu appears.
→ The recorder will play the selected title.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press **◀** to go back to the previous menu.

Editing/ Finalizing Recording (continued)

Rename title

The original title name is generated automatically by the recorder. You can give a new name to the title by following the steps below.

- ① In title editing menu, use ▲▼ keys to select { **Rename Title** } and press **OK**.
→ The keyboard screen appears.
- ② Use ◀▶ ▲▼ keys to highlight a character and press **OK** to select.
→ The maximum input is up to 9 characters.
- You can use the following keys on the keyboard screen to edit your input:
 - : to remove the character to the left of the cursor.
 - : to remove the character to the right of the cursor.
 - : to create a space between characters.
 - : to toggle between upper and lower case characters.
 - : to clear the entry field completely.
- ③ To confirm your entry, select on the keyboard and press **OK**.
→ The info panel is now updated.
- To cancel the changes, select on the keyboard and press **OK**.

Erase title (DVD±RW only)

You can delete a specific title (recording) from the disc.

- ① In title editing menu, use ▲▼ keys to select { **Erase Title** } and press **OK**.
→ A warning message will appear.
- ② Select in the menu to proceed or to abort, then press **OK**.

Overwrite title (DVD±RW only)

This function allows you to overwrite the selected title in the DVD±RW. The other titles will not be affected.

- ① In title editing menu, use ▲▼ keys to select { **Overwrite Title** } and press **OK**.
- ② Select the source you want to record from and press **REC** ● to start overwriting.

Overwrite from the selected title

You can select to overwrite only the recordings from the selected title to the end of the disc.

- In title editing menu, use ▲▼ keys to select { **Overwrite Disc** } and press **OK** to confirm.

Append recording

This function allows you to append recording to the last existing title.

- ① In title editing menu, use ▲▼ keys to select { **Append Title** } and press **OK**.
- ② Press **SOURCE** to select the input channel to append.
- ③ Press **REC** ● to start append recording.
- ④ To stop append recording, press **STOP** ■.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press ◀ to go back to the previous menu.

Editing/ Finalizing Recording (continued)

About video editing

After a recording has been made, this recorder allows you to edit the video content. You can add/delete chapter markers, hide unwanted scenes, change the picture in the index picture screen and split a title (recording) into two.

When you playback a recording in video edit mode, the entire recording will be played back including hidden scenes.

The edit functions available in the disc editing menu are:

{ Title }

Select a title (recording) to play.

{ Chapter }

Select a chapter within the selected title.

{ Chapter Marker }

Insert a chapter marker in the recording or erase a chapter marker to combine two chapters.

{ Hide Chapter }

Hide the unwanted scene in the recording.

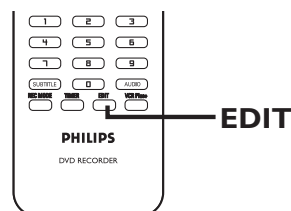
{ Index Picture }

Select a scene in the recording as the index picture screen.

{ Split Title } – DVD±RW only

Divide the recording into two separate titles.

Accessing video editing menu



- 1 Insert a recorded DVD into the recorder.
→ The Index Picture screen appears on the TV.
- 2 Use ▲▼ keys to select a title (recording.)
- 3 Press ►|| to start playback.
- 4 Press **EDIT** on the remote control.
→ The video editing menu appears.

Edit Mode	0:03:28
Title 02/06	
Chapter 01/10	▶
Chapter Marker	
Hide Chapter	
Index Picture	
Split Title	

- 5 Use ▲▼ keys to access different options and press **OK** to select.
→ Instructions and explanations of the options are provided in the following pages.
- 6 To exit, press **EDIT**.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R.
Press ◀ to go back to the previous menu.

Editing/ Finalizing Recording (continued)

Selecting a title

This option shows the current title and the total number of titles in the disc. It also allows you to select a specific title.

- 1 During playback, press **EDIT** to display the video editing menu.
- 2 Use **▲▼** keys to select { **Title** } and press **OK**.
- 3 Use the **numeric keypad 0-9** to key in a title and press **OK**.
→ The recorder will play the selected title.

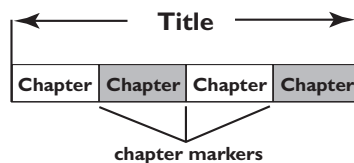
Selecting a chapter

This option shows the current chapter and the total number of chapters in the title. It also allows you to select a specific chapter within the title.

- 1 During playback, press **EDIT** to display the video editing menu.
- 2 Use **▲▼** keys to select { **Chapter** } and press **OK**.
- 3 Use the **numeric keypad 0-9** to key in the chapter and press **OK**.
→ The recorder will play the selected chapter.

Creating chapter marker

You can create a chapter by inserting chapter markers at any point within a title during playback. This will allow you to access a specific point in the recording easily or set a chapter you wish to hide.



- 1 During playback, press **EDIT** to display the video editing menu.
- 2 Use **▲▼** keys to select { **Chapter Marker** } and press **OK**.
- 3 Use **▲▼** keys to select one of the options and press **OK** to confirm.

{ **Insert Marker** }

Select this to insert a new chapter marker at the current point of playback.

{ **Delete Marker** }

Select this to delete the current chapter marker (it refers to the closest marker before the current point of playback.)

{ **Delete All Markers** }

Select this to delete all the chapter markers in the current title.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press **◀** to go back to the previous menu.

Editing/ Finalizing Recording (continued)

Hiding an unwanted chapter

You can choose to hide certain scenes from playback (e.g. skipping a commercial scene) or make it visible again.

- ① Create a chapter marker at the start and end of the scene you want to hide. (See previous page on “Creating Chapter Marker”).
- ② Select the chapter you want to hide and start playback. (See previous page on “Selecting a chapter”).
- ③ During playback, press **EDIT** to display the video editing menu.
- ④ Use **▲▼** keys to select { **Hide Chapter** } and press **OK**.
→ The current chapter will be hidden.

To unhide a chapter

- ① Press **EDIT** on the remote control during playback.
→ The video editing menu appears.
→ While in editing mode, the hidden chapter/chapters will be played back.
- ② Wait for the chapter you want to unhide to occur or use **◀▶** keys on the remote control to make a fast search.
- ③ Use **▲▼** keys to select { **Unhide Chapter** } and press **OK**.
→ The current chapter will be visible during playback.

Helpful Hints:

- All the hidden chapters will be played back while in video editing mode.
- To locate a specific frame during playback, press **▶||** and the **▶** key to forward search to the frame that you want.

Changing Index Picture

The index picture is the picture of the title you will see when the recorder loads up the Index menu. Normally, the first frame of a recording is shown as the title's index picture.

- ① During playback, press **EDIT** to display the video editing menu, then use **▲▼** keys to highlight { **Index Picture** }.
- ② Press **▶||** to pause playback.
- ③ Press **▶** to search for the desired frame and press **OK** to select the current frame as the index picture for the title.

Splitting a title (DVD±RW only)

You can divide the current title into two new titles. Each of these titles is characterised by its own index picture.

Warning! Once a title is divided, the process cannot be reversed.

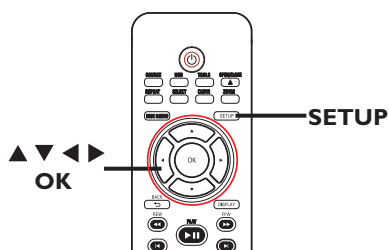
- ① During playback, press **EDIT** to display the video editing menu, then use **▲▼** keys to highlight { **Split Title** }.
- ② Press **▶||** to pause playback.
- ③ Press **▶** to search for the desired frame, and press **OK** to divide the title at the current frame.
→ A new title will be shown at the Index Picture screen.

TIPS: No further recording and editing can be carried out on a full or finalized DVD±R. Press **◀** to go back to the previous menu.

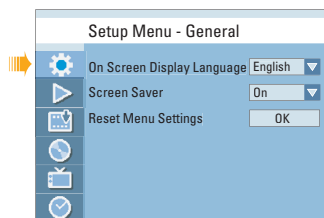
DVD Setup Menu Options

Accessing the Setup Menu

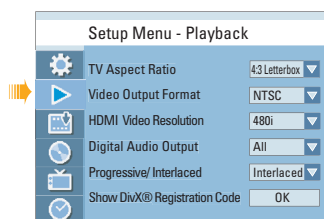
The setup menu provides various options for you to adjust the recorder to suit your preferences.



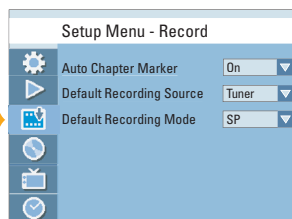
- 1 Press **SETUP** on the remote control.
→ The setup menu appears on TV.
- 2 Use **▲▼** keys to highlight a menu item and press **▶** to access its options.
- 3 Use **▲▼** keys to highlight the setting you wish to change and press **OK** to confirm and go back to the previous menu item.
→ Instructions and explanations of the options are provided in the following pages.
- 4 To exit, press **SETUP**.



See this chapter – “GENERAL Settings”



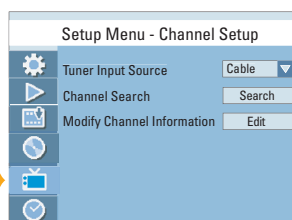
See this chapter – “PLAYBACK Settings”



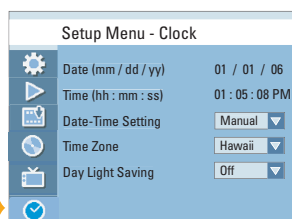
See Recording chapter – “RECORD Settings”



See this chapter – “DVD Settings”



See this chapter “CHANNEL SETUP Settings”



See this chapter “CLOCK Settings”

DVD Setup Menu Options (continued)

GENERAL settings (underlined options are the factory default settings)

On-Screen Display Language	Select the menu language for this recorder on-screen display.
Screen Saver	<p>The screen saver prevents damage to the TV screen by avoiding exposure to a static image for too long.</p> <p>{ <u>On</u> } – Switches to TV screen saver mode when playback has been stopped or paused for longer than 15 minutes.</p> <p>{ <u>Off</u> } – Turns off the screen saver function.</p>
Reset Menu Settings	<p>Restore all the settings of this recorder, except for the PIN code. Reset menu settings can only be changed when there is no disc in the disc tray.</p> <p>1) Press OK to confirm the default restore.</p> <p>2) A warning message will appear. Select OK in the menu to proceed or CANCEL to abort, then press OK to confirm.</p>

RECORD settings

Auto Chapter Marker	<p>Automatically divides a recording (title) into chapters by inserting chapter markers at a specific interval. This enables you to access a specific point in the recording quickly.</p> <p>See the chapter "Recording – RECORD settings" for details.</p>
Default Recording Source	<p>Define your frequent source of recording. The recorder will switch to the default source whenever it is turned on.</p> <p>See the chapter "Recording – RECORD settings" for details.</p>
Default Recording Mode	<p>The recording mode defines the picture quality of recordings and the maximum recording time on a disc.</p> <p>See the chapter "Recording – RECORD settings" for details.</p>

DVD Setup Menu Options (continued)

PLAYBACK settings (underlined options are the factory default settings)

TV Aspect Ratio

Set the aspect ratio of the recorder according to the TV type you have connected.

{ **16:9** } – Select this for wide screen TV (frame ratio 16:9.)



{ **4:3 Letterbox** } – Select this for a 'wide screen' display with black bands on the upper and lower portions of the TV screen.



{ **4:3 Panscan** } – Select this for a full-height picture with both side trimmed.



Video Output Format

The colour system of the DVD system, DVD and TV should match. Only then will it be possible to play a DVD on this system. Before changing the TV system, determine the colour system of your TV.

{ **NTSC** } – Select this if the connected TV has the NTSC colour system. It will change the video signal of a PAL disc and output it to NTSC format.

{ **PAL** } – Select this if the connected TV has the PAL colour system. It will change the video signal of an NTSC disc and output it to PAL format.

Note: If a blank/distorted TV screen appears, wait for 15 seconds for the auto recovery.

HDMI Video Resolution

This feature is only applicable if you have connected a HDMI device. Select the video resolution depending on the capability of the connected HDMI TV/device: { **480i** }, { **480p** }, { **576i** }, { **576p** }.

Digital Audio Output

Adjust the digital output setting only if you have connected other devices to the coaxial jack on the recorder.

{ **ALL** } – Select this if you have used the COAXIAL jack on the recorder to connect to a stereo receiver that has a built in multichannel decoder.

{ **LPCM** } – Select this if the connected audio equipment is not capable of decoding multichannel audio. Dolby Digital and MPEG-2 multi-channel signals are converted to PCM (Pulse Code Modulation.)

DVD Setup Menu Options (continued)

PLAYBACK settings (underlined options are the factory default settings)

Progressive/ Interlaced

Progressive scan delivers a higher picture quality than the standard interlaced TV channel scan. It only works when you have connected the recorder's Y Pb Pr jacks to your TV that supports the progressive video input. Otherwise, the image may not appear or will be distorted. Please check your TV user manual for more information.

1) Use ▲▼ keys to select one of the options.

{ Interlaced } – Select to enable interlaced feature.

{ **Progressive** } – Select to enable progressive scan feature.

2) Press **OK** to confirm your selection.

Show DivX® Registration code

Display the DivX® VOD (Video On Demand) registration code that allows you to rent and purchase videos using the DivX® VOD service. For more information, visit www.divx.com/vod.

1) Press ► to display the registration code.

2) Use the registration code to purchase or rent videos from DivX® VOD service at www.divx.com/vod. Follow the instructions and copy the video from your computer onto a CD-R/RW or recordable DVD disc for playback on this recorder.

DVD Setup Menu Options (continued)

DVD settings (underlined options are the factory default settings)

Default Disc Menu Language

Select the preferred disc menu language for DVD playback.

Default Subtitle Language

Select the preferred subtitle language for DVD playback.

Default Audio Language

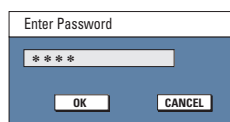
Select the preferred audio language for DVD playback.

Notes:

- If the selected audio/subtitle language is not available on the disc, the disc's default setting language will be used instead.
- For some DVDs, the subtitle/audio language can only be changed via the DVD disc menu.

Parental Rating Level

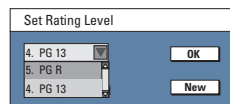
Some DVDs may have a parental level assigned to the complete disc or to certain scenes on the disc. This feature lets you set a playback limitation level.



1) Use **▲▼** keys to select { **Parental Rating Level** } and press **OK**.

2) Use the **numeric keypad 0-9** to enter your four-digit pin code.

When doing this for the first time or if you forget your four-digit pin code, enter the default password '3308'.



3) Move to **OK** in the menu and press **OK** on the remote control. The set rating level menu appears.

4) Use **▲▼** keys to select the desired parental level, then move to **OK** in the menu and press **OK** on the remote control to confirm.


Notes:

- The rating levels range from 1 to 8 and are country dependent. DVDs that are rated higher than the level you have selected will not play unless you enter your four-digit pin code.
- To disable parental controls and allow all discs to play, select { **Off** }.
- VCD, SVCD, CDs have no level indication, so parental control has no effect on these type of discs. This also applies to most illegal DVDs.
- Some DVDs are not coded with a rating though the movie rating may be printed on the disc cover. The rating level feature does not prohibit playback of such discs.

DVD Setup Menu Options (continued)

DVD settings (underlined options are the factory default settings)

Parental Rating Level (continued)



New Password

New password

OK

Confirm password

CANCEL

To change/ reset the password

- 1) Use **▲▼** keys to select { **Parental Rating Level** } and press **OK**.
- 2) Use the **numeric keypad 0-9** to enter your four-digit pin code.
- 3) Move to **OK** in the menu and press **OK** on the remote control. The set rating level menu appears.
- 4) Move to **New** in the menu and press **OK** to access new password menu.
- 5) Use the **numeric keypad 0-9** to enter your new four-digit pin code, then press **▼** to select the next entry field and enter the same pin code a second time.
- 6) Move to **OK** in the menu and press **OK** to confirm.

Note: To abort the change, select **CANCEL** and press **OK**.

DVD Setup Menu Options (continued)

CHANNEL SETUP settings

Tuner Input Source

Set the tuner input source for the recorder.

- 1) Use **▲▼** keys to highlight { **Tuner Input Source** } and press **►** to access the options:

- { **Cable** } – Select this if the recorder is connected via a cable box/satellite receiver.
- { **Air** } – Select this if the recorder is connected directly to the antenna wall outlet.

- 2) Press **OK** to confirm your selection and press **t** to return to the previous screen.

Channel Search

This option automatically scans all the receivable analog local TV channels and stores these channels on the recorder.

Press **OK** on the remote control to start the automatic TV channel search process and replace all previously stored analog TV channels. This process may take several minutes.

Modify Channel Information

Adjust a stored TV channel to your preference and improve the reception and the sound quality of that TV channel.

The screenshot shows a blue-themed menu titled 'Channel'. It contains the following fields and options:

- Name:** Ch003
- Frequency:** 585.26MHz
- Skip:** No (with a dropdown arrow)
- Fine-tune:** A horizontal slider bar.
- Buttons:** OK and CANCEL at the bottom.

- 1) Use **▲▼** keys to highlight { **Modify Channel Information** } and press **OK** to view the channel menu.

- 2) Use **▲▼** keys to select one of the options and press **OK**.

- { **Name** } – Use the **numeric keypad 0-9** to select the channel preset number that you wish to change.

- { **Frequency** } – Adjust the frequency of the channel.
 - Use **◀▶** keys to manually search through the frequency.
 - Use the **numeric keypad 0-9** to enter the frequency.
 - Press **OK** on the remote control to confirm the setting.

DVD Setup Menu Options (continued)

English

CHANNEL SETUP settings	
Modify Channel Information (continued)	<p>Adjust a stored TV channel to your preference and improve the reception and the sound quality of that TV channel.</p> <p>{ Skip } – Select this to set the channel to be skipped.</p> <p>{ No } – The TV channel can be accessed using the P + – on the remote control.</p> <p>{ Yes } – The TV channel can only be accessed by pressing the corresponding number button on the remote control.</p> <p>{ Fine-Tune } – Select this to fine-tune the TV channel manually if the reception is poor. Use ◀▶ keys to adjust the frequency and press OK to confirm.</p>

DVD Setup Menu Options (continued)

CLOCK settings (underlined options are the factory default settings)

Date (mm/dd/yy)	Use ▲▼ keys to change the number and use ◀▶ keys to select different entry fields, then press OK to confirm.
Time (hh:mm:ss)	Use ▲▼ keys to change the number and use ◀▶ keys to select different entry fields, then press OK to confirm.
Date-Time Setting	<p>You can choose to enable/disable the automatic setting of date and time. This feature is dependent on your local broadcaster.</p> <p>{ Auto } – Select to activate automatic setting of date and time.</p> <p>{ <u>Manual</u> } – Select this to manually set the date and time.</p>
Time Zone	<p>Select an appropriate setting to adjust the automatic date-time settings: { <u>Hawaii</u> }, { Alaska }, { Pacific }, { Mountain }, { Central }, { Eastern } or { Alantic }.</p>
Day Light Saving	<p>Select an appropriate setting to adjust the automatic date-time settings.</p> <p>{ On } – Select this to activate summer time setting.</p> <p>{ <u>Off</u> } – Select this to deactivate summer time setting.</p>

Installing the latest software

The software installed in your recorder is continuously being refined for greater stability and compatibility of the set. Periodically, Philips will issue upgrades for the firmware which you copy onto a CD and install the software of your recorder.

Caution! Power supply must not be interrupted during upgrade!

- Visit Philips' website at 'www.philips.com/usasupport' to check for the availability of the latest software upgrade.

Note: When checking for the latest software upgrade, please also check for any accompanying instructions on installing the software.

Troubleshooting

WARNING

Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty. Do not open the system as there is a risk of electric shock.

If a fault occurs, first check the points listed below before taking the system for repair. If you are unable to remedy a problem by following these hints, consult your dealer or Philips for help.

Problem (General)	Solution
No power.	<ul style="list-style-type: none"> – Press STANDBY-ON button on the front of the recorder to turn on the system. – Make sure the AC outlet has power.
Remote control does not work.	<ul style="list-style-type: none"> – Aim the remote control directly at the sensor on the front of the DVD recorder (not towards TV.) – Remove any obstacles between the recorder and the remote control. Aim the remote control towards the set at different angles and/or distances. – Batteries are weak, replace the batteries. – Press SOURCE on the remote control to select an input source.
No picture.	<ul style="list-style-type: none"> – Turn on your TV and set to the correct Video In channel. Switch the TV channel until you see the DVD screen. Read chapter "Step 3 - Installation and Setup – Finding the correct viewing channel" for details. – Check the video connection between the recorder and the TV. – Your DVD recorder might have been set to Progressive Scan mode while your TV does not support Progressive Scan. Follow the steps below: <ol style="list-style-type: none"> 1) Connect the supplied AV cable (red/white/yellow) from your DVD recorder OUT2 on the rear panel to the TV's Video In and Audio In jacks. 2) Turn on the TV and use the TV's remote control to select the corresponding video-in channel on the TV. (eg., AV, EXT1.) 3) Turn on the DVD recorder and wait until the display panel shows 'No DISC'. Then use the recorder's remote control to enter the code "116811" and press OK. The blue Philips screen should appear on the screen.
No display on the TV screen.	<ul style="list-style-type: none"> – When the HDMI and the Video(CVBS)/ S-Video/ Component video jacks are used to connect to a TV at the same time, there may be no picture output from the video connection. Disconnect the HDMI cable from the TV.

Troubleshooting (continued)

Problem (General)	Solution
No sound.	<ul style="list-style-type: none"> – Check the audio connections, the red and white jacks. Read chapter “Step 1: Basic Recorder Connections - Connecting the audio cables” for details. – Set the Digital output correctly, based on the equipment you connected to the DVD recorder. Read chapter “DVD Setup Menu Options – PLAYBACK settings – Digital Audio Output” for details.
No TV signal received from the recorder.	<ul style="list-style-type: none"> – Have your antenna or cable TV signal checked. – Install the TV channel. Read chapter “Step 3: Installation and Setup - Setting your TV channel programs” for details.
A TV channel installed during the DVD recorder’s automatic TV channel search is fuzzy or distorted.	<ul style="list-style-type: none"> – Check the video connection between the DVD recorder and the TV. – You can further fine-tune the signal of the TV channel. Read chapter on “DVD Setup Menu Options - CHANNEL SETUP Settings – Modify Channel Information.” – Press P +/- to search for the same TV channel which may have a clearer picture.
Unable to eject disc tray.	<ul style="list-style-type: none"> – Exit from any system or recording setup menu until you see the Philips wallpaper on the screen. – Press STOP to stop any playback or recording. Then press EJECT on the set or press OPEN/CLOSE on the remote control to eject the disc tray.
The contents of the USB flash drive cannot be read.	<ul style="list-style-type: none"> – The USB flash drive format is not compatible with the system. – Drive is formatted with a different file system which is not supported by this DVD system (e.g. NTFS.)
Slow operation of the USB flash drive.	<ul style="list-style-type: none"> – Large file size or high memory USB flash drive takes longer time to read and display on the TV.
No HDMI audio output.	<ul style="list-style-type: none"> – You will not hear any sound from the HDMI output if the source device is only DVI/HDCP (High-bandwidth Digital Content Protection)-compatible. – It is not possible to output SACD or copy-controlled DVD-Audio sources from the HDMI connection.
No HDMI video output.	<ul style="list-style-type: none"> – HDMI connection can only be made to HDMI-equipped devices with HDCP (High Bandwidth Digital Content Protection.) If you wish to connect to a DVI connector (equipped with HDCP), you will need a separate adaptor (DVI to HDMI.) – Make sure the resolution of this DVD system matches the device you have connected using the HDMI. See HDMI setting.

Troubleshooting (continued)

Problem (Playback)	Solution
Disc does not play.	<ul style="list-style-type: none"> – Insert the disc with the label facing up. – Wrong region code. The DVD must be coded for ALL regions or Region I in order to play on this DVD recorder. – There is no recording on the disc or wrong disc type. Read chapter “Playback - Playable discs” for details. – Make sure the disc is not scratched or warped. Clean the disc or replace a new one. – Check if the disc is defective by trying another disc.
Distorted sound coming from a connected hi-fi system or amplifier.	<ul style="list-style-type: none"> – Do not connect any cables from the recorder to the ‘Phono’ input of your amplifier. – If you are playing a DTS CD, you have to connect the COAXIAL jack of this recorder to a Hi-Fi system or amplifier.
Unable to play DivX movies.	<ul style="list-style-type: none"> – Ensure that the DivX file is encoded according to the ‘Home Theatre Profile’ with the DivX encoder. – Check that the DivX movie downloaded is a complete file.
The picture is distorted or black and white during playback.	<ul style="list-style-type: none"> – The disc does not match with the TV colour system standard (PAL/NTSC.) Change the { Video Output format } in { Setup Menu – General }. – The disc is dirty, clean the disc. – Sometimes a small amount of picture distortion may appear. This is not a malfunction.
There is picture or sound interference with the TV reception.	<ul style="list-style-type: none"> – Have your antenna or cable TV signal checked. – Do not tie the cables of the connected equipments together. – Fine-tune your TV channel. Read chapter “Installation and Setup - Setting your TV channel programs” for details.
The message ‘UNKNOWN DISC’ appears.	<ul style="list-style-type: none"> – This message may appear if you insert a disc that may have encountered one of the following: <ul style="list-style-type: none"> – Error during recording: The title may be missing. – Error while changing the title/index picture: The original title/index picture may be visible. – Error while finalizing or the disc has not been finalized.

Troubleshooting (continued)

Problem (Recording)	Solution
The wrong TV channel was decoded (recorded) after you programmed a recording using the VCR Plus+® system.	<ol style="list-style-type: none"> 1) Press the VCR Plus+ key on the remote control, enter the PlusCode programming number of the desired TV channel. 2) Press OK to confirm. 3) Check the channel number in the {Program #} input field. If this does not correspond to the desired TV channel, select this entry field and change the channel number. 4) Press OK to confirm.
Picture is fuzzy and brightness varies when copying DVD Video discs or prerecorded video tapes.	<ul style="list-style-type: none"> – This happens if you try to copy DVDs or video tapes that have been copy-protected. Even though the picture on the TV is fine, but the recording on the recordable DVD disc is faulty. This interference is unavoidable with copy-protected DVDs or video tapes. – The recordable DVD disc has a limited recording lifetime, please change a new disc for recording.
Recordings are not occurring as scheduled. New recordings cannot be made.	<ul style="list-style-type: none"> – The TV channel you want to record is not stored or you selected the wrong program number. Check TV channels stored. – If you adjust the clock after you set a timer recording, you have to reset the timer recording. – If the recorder cannot read the disc, you cannot record. – You cannot use the recorder to duplicate copyrighted materials (DVDs or videotapes) onto a DVD±R/±RW. – A finalized DVD±R has been inserted. Change disc.
A DVD±R/±RW recorded on this DVD recorder does not playback on a DVD player.	<ul style="list-style-type: none"> – If a recording is too short, it is possible that a DVD player cannot detect it. Please observe the following 'minimum recording times'. Mode of record quality: {High Quality - HQ} – 5 minutes, {Standard Play - SP} – 10 minutes, {Standard Play Plus - SPP} – 13 minutes, {Long Play - LP} – 15 minutes, {Extended Play - EP} – 20 minutes, {Super Long Play - SLP} – 30 minutes. – You have to finalize the DVD±R. Refer to chapter "Playing your recordings on other DVD players (DVD±R)" for details.

Frequently Asked Questions

What kind of disc should I use for recording?

You can only record on DVD±R, DVD±RW or DVD+R DL discs. They are compatible with DVD-Video players and DVD-ROM drives in computers.

What is the capacity of a DVD±R/+RW disc?

4.7GB, or equivalent to six CDs. You can store only one hour of recordings on a single disc at the highest quality (DVD standard) and about 6 hours recording at the lowest quality (VHS standard.)

What is the difference between DVD±R and DVD±RW?

DVD±R is "recordable" and DVD±RW is "rewritable". With a DVD±R, you can record multiple sessions on the same disc, but when the disc is full, you cannot record any more on the disc. The DVD±RW allows you to record over the same disc repeatedly.

How do I check the remaining space available on a recordable DVD disc?

In disc menu mode, press REC MODE on the remote control to display the remaining time available. (The length if time available depends on the mode of recording quality.)

What is DV?

Using DV, also known as i.LINK, you can connect a DV-equipped camcorder to this recorder using a single DV cable for input and output of audio, video, data and control signals.

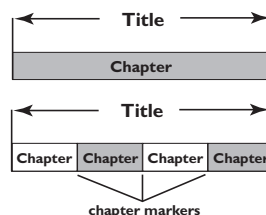
- This recorder is only compatible with DV-format (DVC-SD) camcorders. Digital satellite tuners and Digital VHS video recorders are not compatible.
- You cannot connect more than one DV camcorder at a time to this recorder.
- You cannot control this recorder from external equipment connected via the DV IN jack.

Can I copy a VHS tape or DVD from an external player?

Yes, but only if the VHS tape or DVD is not copy protected.

What are Titles and Chapters?

A DVD disc contains Titles and Chapters, which are similar to the Titles and Chapters of a book. A Title is often a complete movie and is broken down into Chapters, or individual scenes from the movies.



Programs are recorded as a single title, it may consist of one chapter or a few chapters within a title, depending on the recording settings.

How do I set up Titles and Chapters?

The recorder automatically creates a new Title every time you start a new recording. You can then add Chapters to these recordings manually or have them automatically inserted at 5-minute intervals.

What does "finalizing" a disc do?

Finalizing a disc locks the disc so it can no longer be recorded, only required for DVD±R. It will then be compatible with any DVD player. To close a disc without finalizing it, simply stop recording and eject the disc. You will still be able to record on the disc if there is room for more recordings.

Frequently Asked Questions (continued)

How good is the quality of the recording?

There are a few quality levels to choose from, ranging from “1 hour mode” (High Quality) to “6 hours mode” (Super Long Play.) Press the REC MODE button on the remote control to choose the quality level that best suits your purpose and the length of material.

Record Mode	Picture Quality	Maximum Recording Time per Disc (hours)
HQ	High Quality	1
SP	Standard Play	2
SPP	Standard Play Plus	2.5
LP	Long Play	3
EP	Extended Play	4
SLP	Super Long Play	6

What is HDMI?

High-Definition Multimedia Interface (HDMI) is a high-speed digital interface that can transmit uncompressed high definition video and digital multichannel audio. It delivers perfect picture and sound quality, completely free from noise. HDMI is fully backward-compatible with DVI.

As required by the HDMI standard, connecting to HDMI or DVI products without HDCP (High-bandwidth Digital Content Protection) will result in no video or audio output.

Specifications

Picture/Display

- Aspect ratio: 4:3, 16:9
- D/A converter: 10 bit, 54 MHz
- A/D converter: 10 bit, 27 MHz
- Picture enhancement: Progressive Scan

Sound

- D/A converter: 24 bit, 192 kHz
- A/D converter: 24 bit, 96 kHz
- Signal to noise ratio: 102 dB
- Crosstalk (1kHz): 105 dB
- Dynamic Range (1kHz): 90 dB

Video Recording

- Recording system: NTSC
- Compression formats: MPEG2
- Recording modes:

High Quality	: HQ
Standard Play	: SP
Standard Play Plus	: SPP
Long Play	: LP
Extended Play	: EP
Super Long Play	: SLP
- Audio compression: Dolby Digital

Video Playback

- Disc playback media: CD, CD-R/-RW, DVD, DVD-Video, DVD+R/+RW, DVD-R/-RW SVCD, Video CD
- Compression formats: MPEG2, MPEG1, DivX
- Video disc playback system: NTSC, PAL

Audio Playback

- Disc playback media: CD, CD-R/-RW, MP3-CD, MP3-DVD, WMA
- Compression formats: Dolby Digital, DTS, MP3, MPEG2 Multichannel, PCM
- MP3 bit rates: 32~256 kbps and VBR

Still Picture Playback

- Disc formats: DVD+R/+RW, DVD-R/-RW, Picture CD
- Picture compression formats: JPEG
- Picture enhancement: Rotate, Zoom

Storage Media

- Recording media: DVD+R, DVD+RW, DVD+R DL, DVD-R, DVD-RW,

Tuner/Reception/Transmission

- TV system: NTSC
- Aerial Input: 75 Ohm coaxial (IEC75)

Connectivity

Front Connections:

- i.LINK DV in (IEEE 1394 4-pin)
- CVBS In (CAM 1)
- S-Video Y/C In (CAM 2)
- Audio left/right In
- USB 1.1

Rear Connections:

- Component Video (YPbPr) In
- Component Video (YPbPr) Out
- Composite video (CVBS) Input
- Composite video (CVBS) Output
- Digital audio (coaxial) Out
- HDMI Out
- S-Video In
- S-Video Out
- Audio left/right In
- Audio left/right Out
- RF antenna In
- RF TV Out
- Mains

Convenience

- Programming/Timer Enhancements: Daily/Weekly, Repeat Timer Recording, Manual Timer, One Touch Recording, VCR Plus+®
- Programmable events: 20

Power

- Power supply: 120 V; 60 Hz
- Consumption: 25 W (typical)
- Standby power consumption: < 3W

Cabinet

- Dimensions (wxhxd) : 435 x 43 x 322mm
- Net Weight : 3 kg

Display panel symbols/ messages

The following symbols/ messages may appear on your recorder display:

- **00:00:00**
Multifunction display/ text line
 - Title/ track number
 - Total/ elapsed/remaining title/track time
 - Disc/title name
 - Additional information regarding the disc
 - TV channel number or source of video
 - Clock (This is displayed in Standby mode.)
 - TV program title
- **BLANK**
There are no recordings in the disc on the tray.
- **FULL**
Disc is full. There is no more storage space for new recordings.
- **HDMI TV ERROR**
The TV connected is non-HDCP compliant. No video can be displayed via the HDMI connection.
- **LOADING**
Disc is being recognised by the recorder.
- **MENU**
The setup menu, disc menu, title menu or timer menu display is on.
- **NO DISC**
No disc has been inserted. If a disc has been inserted, then it is possible that the disc cannot be read.
- **OPEN**
Disc tray is opening or opened.
- **PHOTO**
A picture disc has been inserted.
- **STARTUP**
The recorder has been turned on.
- **REGION**
When the DVD inserted is in a wrong region code as the recorder.
- **STOP**
When playback / recording is stopped.
- **⌚ TIMER**
A timer recording has been programmed or is active.
- **UPDATE**
The recorder is writing to the disc.
- **UNKNOWN**
The recorder has encountered an error in handling the disc inserted.
- **SET CLOCK**
The system clock has to be set.
- **UNRECORDABLE DISC**
The disc inserted cannot be used for recording.
- **COPY PROTECT**
The content is copy- protected.
- **FINALIZED DISC**
The disc inserted has been finalized. No further recordings can be made on the disc.
- **RECORDING**
A recording is in progress.

Glossary

Analog: Sound that has not been turned into numbers. Analog sound varies, while digital sound has specific numerical values. These jacks send audio through two channels, the left and right.

Aspect ratio: The ratio of vertical and horizontal sizes of a displayed image. The horizontal vs. vertical ratio of conventional TVs. is 4:3, and that of wide-screens is 16:9.

AUDIO OUT Jacks: Red and white jacks on the back of the system that send audio to another system (TV, Stereo, etc.)

Chapter: Sections of a picture or a music piece on a DVD that are smaller than titles. A title is composed of several chapters. Each chapter is assigned a chapter number enabling you to locate the chapter you want.

Component Video Out Jacks: Jacks on the back of the DVD System that send high-quality video to a TV that has Component Video In jacks (R/G/B, Y/Pb/Pr, etc.)

Digital: Sound that has been converted into numerical values. Digital sound is available when you use the DIGITAL AUDIO OUT COAXIAL. These jacks send audio through multiple channels, instead of just two channels as analog does.

Disc menu: A screen display prepared for allowing selection of images, sounds, subtitles, multi-angles, etc recorded on a DVD.

DivX: The DivX code is a patent pending, MPEG-4 based video compression technology, developed by DivXNetworks Inc., that can shrink digital video to sizes small enough to be transported over the internet, while maintaining high visual quality.

Dolby Digital: A surround sound system developed by Dolby Laboratories containing up to six channels of digital audio (front left and right, surround left and right, centre and subwoofer.)

DTS: Digital Theatre Systems. This is a surround sound system, but it is different from Dolby Digital. The formats were developed by different companies.

HDMI: High-Definition Multimedia Interface (HDMI) is a high-speed digital interface that can transmit uncompressed high definition video and digital multichannel audio. It delivers perfect picture and sound quality, completely free from noise. HDMI is fully backward-compatible with DVI. As required by the HDMI standard, connecting to HDMI or DVI products without HDCP (High-bandwidth Digital Content Protection) will result in no Video or Audio output.

Index Picture Screen: A screen that gives an overview of a DVD±RW or DVD±R. An Index Picture represents each recording.

JPEG: A very common digital still picture format. A still-picture data compression system proposed by the Joint Photographic Expert Group, which features small decrease in image quality in spite of its high compression ratio.

MP3: A file format with a sound data compression system. "MP3" is the abbreviation of Motion Picture Experts Group 1 (or MPEG-1) Audio Layer 3. By using the MP3 format, one CD-R or CD-RW can contain about 10 times more data than a regular CD.

MPEG: Motion Picture Experts Group. A collection of compression systems for digital audio and video.

Multichannel: DVDs are formatted to have each sound track constitute one sound field. Multichannel refers to a structure of sound tracks having three or more channels.

Glossary (continued)

PBC: Playback Control. Refers to the signal recorded on video CDs or SVCDs for controlling playback. By using menu screens recorded on a Video CD or SVCD that supports PBC, you can enjoy interactive playback and searching.

PCM: Pulse Code Modulation. A digital audio encoding system.

Parental control: Limits disc play according to the age of the users or the limitation level in each country. The limitation varies from disc to disc; when it is activated, playback will be prohibited if the software's level is higher than the user-set level.

Region code: A system allowing discs to be played only in the region designated. This unit will only play discs that have compatible region codes. You can find the region code of your unit by looking on the product label. Some discs are compatible with more than one region (or ALL regions.)

S-Video: Produces a clear picture by sending separate signals for the luminance and the colour. You can use S-Video only if your TV has an S-Video In jack.

Surround: A system for creating realistic three dimensional sound fields full of realism by arranging multiple speakers around the listener.

Title: The longest section of a movie or music feature on DVD. Each title is assigned a title number, enabling you to locate the title you want.

VIDEO OUT jack: Yellow jack on the back of the DVD system that sends the DVD picture video to a TV.

WMA : WMA is short for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA data can be encoded by using Windows Media Player version 9 or Windows Media Player for Windows XP. Files are recognised by their file extension". wma" or ".WMA".

PHILIPS LIMITED WARRANTY ONE (1) YEAR

WARRANTY COVERAGE:

PHILIPS warranty obligation is limited to the terms set forth below.

WHO IS COVERED:

Philips warrants the product to the original purchaser or the person receiving the product as a gift against defects in materials and workmanship as based on the date of original purchase ("Warranty Period") from an Authorized Dealer. The original sales receipt showing the product name and the purchase date from an authorized retailer is considered such proof.

WHAT IS COVERED:

The Philips warranty covers new products if a defect arises and a valid claim is received by Philips within the Warranty Period. At its option, Philips will either (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new, or serviceable used parts and is at least functionally equivalent or most comparable to the original product in Philips current inventory, or (3) refund the original purchase price of the product.

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Note: Any product sold and identified as refurbished or renewed carries a ninety (90) day limited warranty.

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- Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- Product repair and/or part replacement because of improper installation, connections to improper voltage supply, abuse, neglect, misuse, accident, unauthorized repair or other cause not within the control of Philips.
- Damage or claims for products not being available for use, or for lost data or lost software.
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- A product used for commercial or institutional purposes (including but not limited to rental purposes).
- Product lost in shipment and no signature verification receipt can be provided.
- Failure to operate per Owner's Manual.

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